Mr ~~Seifert~~ Sigel

LABOR-HEALTH, EDUCATION, AND WELFARE APPROPRIATIONS FOR 1959

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HEARINGS

BEFORE THE

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

UNITED STATES SENATE

EIGHTY-FIFTH CONGRESS

SECOND SESSION

ON

H. R. 11645

MAKING APPROPRIATIONS FOR THE DEPARTMENTS OF LABOR AND HEALTH, EDUCATION, AND WELFARE, AND RELATED AGENCIES, FOR THE FISCAL YEAR ENDING JUNE 30, 1959, AND FOR OTHER PURPOSES

Printed for the use of the Committee on Appropriations

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LABOR-HEALTH, EDUCATION, AND WELFARE APPROPRIATIONS FOR 1959

TUESDAY, APRIL 1, 1958

United States Senate,
Subcommittee of the Committee on Appropriations,
Washington, D. C.

The subcommittee met at 10 a. m., pursuant to call, in room F–39, the Capitol, Hon. Lister Hill (chairman of the subcommittee) presiding.

Present: Senators Hill, Hayden, Thye, Smith, Dworshak, Potter and Ives.

DEPARTMENT OF LABOR

Office of the Secretary

STATEMENT OF HON. JAMES P. MITCHELL, SECRETARY OF LABOR; ACCOMPANIED BY JAMES E. DODSON, ADMINISTRATIVE ASSISTANT SECRETARY, DEPARTMENT OF LABOR

General Statement of Secretary Mitchell

Senator Hill. The committee will kindly come to order.

We are very happy to have with us this morning the Secretary of Labor, Hon. James P. Mitchell.

Mr. Secretary, we will be glad now to have you proceed in your own way and make any statement you see fit, sir.

Secretary Mitchell. Mr. Chairman and members of the Appropriations Committee, I appreciate this opportunity to present our program and our financial needs for 1959.

I believe it necessary at the beginning to explain the basis for the estimates now before you. These estimates were prepared in the summer of 1957 on the basis of the best forecast of the economy available at that time for the fiscal year 1959.

By far, the majority of our money requests pertain to employment service and unemployment insurance functions. The forecast at that time estimated we would be faced with a workload of 2 million average weekly insured unemployed during the fiscal year 1959. It also contemplated that we would reach a peak in February of this year of 2,900,000 and a tapering off of the insured unemployment load would begin the last week in February.

INSURED UNEMPLOYMENT AS OF MARCH 1

The experience of the past 6 weeks now indicates that our estimates are low. Insured unemployment reached a peak of 3,359,000 in the week ended March 1. For the week ended March 15 the figure was

3,344,000. These figures I have given include people receiving insurance payments under the State unemployment insurance program, the veterans and Federal workers unemployment insurance programs. It does not include figures for railroad workers since we do not administer that program.

The chairman of our House Subcommittee on Appropriations invited me to submit a revised estimate for appropriations affected by the change in unemployment, but I felt the best approach to the problem is to wait until we have the advantage of experience closer to the beginning of the fiscal year to which the estimates apply before attempting a revision. I hope this committee will agree with this approach.

I do want to say that the unemployment experience of recent weeks makes it obvious that a supplemental estimate will be necessary for activities of the Bureau of Employment Security and probably for the Bureau of Labor Statistics. I will now proceed to make a brief statement concerning the 1959 estimate now before you.

FINANCIAL ANALYSIS OF 1959 REQUEST

The total request for 1959 is $472,365,000. Of this amount $39,265,000—about 8½ percent—is for salaries and expenses for the Department of Labor. The balance of $433,100,000 is for grants to States for administering the State employment security systems, for unemployment and accident benefit payments to Federal workers and for unemployment benefit payments to veterans; $336,763,300 of this request is not a charge to general tax revenues. This amount is financed out of various trust funds or for fees collected. A table attached gives the source of this financing.

Senator HILL. We will have that table, of course, put in the record immediately following your remarks.

Secretary MITCHELL. Yes. sir.

ESTIMATE FOR SALARIES AND EXPENSES

In 1958 we have a total of $38,283,400 for salaries and expenses for the Department of Labor. We are requesting an increase of $981,600 or about 2½ percent more dollars for 1959.

Highlights of program increases. For the Office of the Secretary: For this Office I am requesting a total of $1,556,000. This is an increase of $76,000 and is for the following areas:

An additional amount of $49,730 is requested for international labor activities. This would allow a total of $230,000 which is approximately what we requested for 1958.

Senator IVES. May I interrupt?

Is that the ILO and the other activities connected with international labor?

Secretary MITCHELL. ILO.

Senator IVES. May I make this comment on that.

I happen to know a little bit about the ILO. It was my observation that the amount allowed for the ILO delegation was not enough during 1953. I do not know how much you stepped it up since.

I will never forget I was president of the conference that year, and as president I had to put on a reception. The Brazilians had had

the presidency the year before, and they had a $5,000 reception, which was really quite a reception. Darn near everybody got plastered.

They allowed me originally $1,200. I got hold of Secretary Dulles on the thing, and I said, "I don't think we can take care of all these people for $1,200. It just can't be done. There are too many of them."

You know how many there are at those conferences. We bickered back and forth and he finally allowed me, I think, $400 more. Then I issued the proclamation we are going to do it for $1,200.

We were in a period in the United States of austerity and we were going to demonstrate to the world that that was the way we were. We would give them all the liquor we could give them for $1,200. And that was the end of it.

By golly, we did, and everybody said it was the best reception they had ever had there because everybody went home sober, which is something.

With that $400 that Secretary Dulles gave me I put on a dinner for our South American friends, and it did not come to quite that. So I turned the money back. However, that should not be regarded as a typical example of what is needed. I happen to know that more is needed.

Secretary MITCHELL. Senator, as you know, the money that is used for the expenses at the ILO come out of the State Department fund for contributions to international organizations.

Senator IVES. I know it does.

Secretary MITCHELL. And not out of these funds.

Senator IVES. That is why I asked if they had anything to do with that.

Secretary MITCHELL. That has to do with the additional activities which we need to place in the ILO.

RELATION TO ILO ACTIVITIES

Senator HILL. Give us just a little picture, very briefly, Mr. Secretary, of how your activity fits in with the overall ILO activities.

Secretary MITCHELL. We are responsible, Mr. Chairman, for the full workings so far as the United States Government is concerned in the ILO. The representative of the Labor Department heads the United States Government delegation at the governing bodies and at the conferences of the ILO. The contacts with the Government by both employer and worker delegations are through the Labor Department.

While the State Department is responsible broadly for the development and execution of foreign policy, in this specialized area of the ILO the responsibility is on the Department of Labor, so that it is necessary for us the year around to maintain liaison with the ILO in Geneva, with the various labor attachés in the embassies abroad on those matters which affect international labor, so that we are, in effect, the operating arm of the Government with respect to ILO activity.

Senator HILL. You are the operating arm, as you say.

Secretary MITCHELL. That is right.

Senator HILL. All right, sir.

Secretary MITCHELL. The increase relates to expansion of our area specialist program and for increasing attention and emphasis on the ILO program.

An amount of $29,375 is requested to initiate a series of annual conferences of outstanding people in the field of management and labor to discuss and find practical solutions to what the Department can do to meet the emerging problems of the labor force.

FISCAL AND SERVICE ACTIVITIES

We need to strengthen and improve our work in the field of the Department's fiscal and service activities. An increase of $26,775 is requested for the Administrative Assistant Secretary to enable him to do this and to relieve him of much day-to-day administrative activities so that he can spend his time more usefully in broader areas.

There is a need to initiate nonmilitary defense planning to meet emergency situations. This is strictly a responsibility of the Department under its own basic authority. Regardless of ODM or FCDA, the Department must develop plans of how it would operate in an emergency which might involve devastation of whole or partial areas as a result of an attack or of a national disaster. This means primarily that our manpower programs must be geared to operate for periods of time without direction and guidance from the seat of government. I am requesting $17,200 for this Office. There are similar requests contained in the estimates for employment security and statistical programs.

BUREAU OF LABOR STANDARDS

The increase of $19,000 in this appropriation is for the President's Committee on National Employ the Physically Handicapped Week. Increasing public awareness and interest in this program is generating activities which present staff is unable to cope with. General Maas will speak later on this item.

BUREAU OF APPRENTICESHIP AND TRAINING

The total budget request is $3,900,000. This represents an increase of $300,000.

What I am proposing here is additional funds to permit an approach to inventorying the community's and the industry's skill resources and the facilities available locally to meet skill requirements. In 1959 programs will be conducted by the Bureau of Employment Security in about 40 States on a cooperative basis with State employment security agencies. In order for the Bureau of Apprenticeship and Training to follow up on the on-the-job skill training problems in these areas the Bureau needs more staff.

A major objective of the Department is to stimulate the development of a high level of skilled workers in industry. The proportion of workers entering the skilled labor force through organized apprenticeship must be increased significantly because apprenticeship provides a firm basis for higher skill development. Likewise, journeymen in many instances will require supplemental training to meet current technological advances. We must stimulate industry to provide more adequate on-the-job training. This will result in an in-

creased demand on the technical and vocational education facilities for more and improved off-the-job related instruction.

The changing composition of our labor force and rapid advances in modern technology makes it necessary to stimulate broad training programs looking forward to the next decade. Our basic problem is not only to match men and jobs but to stimulate improvement of their usefulness and abilities.

Bureau of Employment Security

The total requested is $6,300,000. This represents an increase of $342,000.

The basic needs for increases in this program are for improved counseling; expanded efforts of job-placement assistance in smaller communities and in assisting the States in improving their fiscal control over tax collections and accounting and strengthening Federal audit of State expenditures.

We are working on the placement of such special groups as older workers, women, young workers, the physically handicapped, and minority workers. Since we have been keeping records of older placements—May 1957—we have made a total of 671,222 placements in 7 months, through November. Proportionately during this period there has been about a 2-percent increase in the placement of older workers.

One million five hundred and eight thousand job counseling interviews were conducted, 1,448,000 aptitude tests were given and 6,163,000 placements were made in 1957. Job counseling and aptitude testing pays off in terms of matching men and jobs. It is helpful, too, to our placement efforts to provide job counseling and aptitude tests to those high-school graduates who express an intention to enter the labor market.

In 1959 we propose to expand our employment counseling and job-aptitude testing and to continue to make available our job-aptitude testing facilities to the 8,000—one-third—of the high schools of the country which have requested it.

Grants to States, Unemployment Compensation Benefits for Veterans and Federal Workers

Our request for grants to States for employment-security activities totals $329,300,000 and is based on our best projection at this time of what the workload will be. No doubt when Mr. Goodwin appears you will want to go into some detail as to how we computed the amount requested.

In connection with the moneys required for the veterans unemployment-insurance payments and also those for the Federal unemployment-insurance payments the amount requested is on the basis of estimates made in September, and we may find it necessary to request a revision of the amount now before you. The veterans' unemployment-compensation program is the one which will most likely need revision.

Insofar as the grants appropriation is concerned, increases in the labor force involve larger workloads. Job counseling must be expanded; better knowledge of local economic situations and job requirements is needed; improvements in farm-placement activities is needed; and various fixed charge increases must be met as must authorized State salary increases.

BUREAU OF LABOR STATISTICS

I am requesting a total of $7,572,000. This is an increase of $372,000. This increase enables us to improve measurement of trends in productivity and to calculate productivity measures on both a paid man-hour and actual hours worked in manufacturing and in some important areas of nonmanufacturing. In addition, we should continue to improve the wholesale and retail price program and evaluate inventories.

Senator HAYDEN. I do not know whether this is quite an appropriate place or not, but I read a very interesting statement in the report submitted to the Senate on the Federal-Aid Highway Act by Senator Chavez. It says:

It is submitted that each $9,000 spent for highway work provided one man-year of employment.

I wonder if he obtained that figure from the Department of Labor.

Secretary MITCHELL. No, sir; he did not.

Senator HAYDEN. Do you have any way of telling us, if we appropriate money for various kinds of projects like rivers, harbors, and flood control, reclamation, highways, of things of that kind, how much is on the job and how much is off the job in the way of employment?

Secretary MITCHELL. We could endeavor to get some rough estimates on that. Of course, I assume, Senator, that that figure represents the total investment in material and equipment that is necessary to keep a man at work in terms of tractors, bulldozers, cement, architects, engineers, and the whole thing.

Senator HAYDEN. In highway work the cement has to be made in one place and it has to be hauled. The oil that is put on the road is something else, and so on. Then we have reinforcing steel that goes into bridges.

I did not know whether your Department had made any analysis of on-the-job and off-the-job contract work of that character.

Secretary MITCHELL. We have made some, sir. If it is of interest to the committee, we would endeavor to get such figures within our resources.

Senator HAYDEN. If you could get some information like that when we have the public works bill up for consideration this year, when we consider these various kinds of projects, I think it would be helpful. There would be time enough to do that. The bill has not passed the House as yet.

Secretary MITCHELL. I would like to explore the possibilities in the Department as to whether we could or not, and let you know.

Senator HAYDEN. I believe that the figures will be interesting.

Senator HILL. You give us the best you can on that then, will you, Mr. Secretary.

Secretary MITCHELL. Yes, sir.

(The following statement was submitted:)

The Department is having the BLS prepare a report on this matter and it will be furnished the committee as soon as possible.

Senator HAYDEN. Thank you.

Other Bureaus

Secretary Mitchell. Program increases are not contemplated for the Office of the Solicitor, Mexican Farm Labor, Bureau of Veterans' Reemployment Rights, or the Women's Bureau. Decreases in the Bureau of Employees' Compensation and in the Wage and Hour Division are reflected without diminishing either effectiveness of service or of enforcement of laws.

COMMENTS ON HOUSE ACTION

I would like to make a brief statement as to my reactions concerning the approval of the estimates by the House.

I have sent a letter indicating the specific items and amounts which we desire to appeal from the House action.

Senator Hill. We will place that letter in the record at this point, Mr. Secretary.

(The letter referred to follows:)

March 28, 1958.

Hon. Lister Hill,
United States Senate, Washington, D. C.

Dear Senator Hill: The action of the House of Representatives on the Department of Labor's appropriation request for 1959 will seriously affect the performance of the Department's functions in programs designed (*a*) to ease the strain of unemployment, (*b*) to find appropriate employment for the job seeker, and (*c*) to provide needed economic data to better appraise changing economic conditions.

I request that the attached specific amendments be offered to H. R. 11645.

Sincerely yours,

_____ _____,
Secretary of Labor.

Office of the Secretary

SALARIES AND EXPENSES

On page 2, line 12, strike out "$1,478,000" and insert "$1,538,800" and strike out the next phrase "of which not more than $213,000 shall be for international labor affairs".

Bureau of Labor Standards

SALARIES AND EXPENSES

One page 3, line 2, strike out "$192,575" and insert "$201,575".
One page 3, line 12, strike out "$995,000" and insert "$1,004,000".

Bureau of Apprenticeship

SALARIES AND EXPENSES

On page 4, insert in title after the word "Apprenticeship" the words "and Training".
On page 4, line 6, strike out "$3,600,000" and insert "$3,900,000".

Bureau of Employment Security

GRANTS TO STATES FOR UNEMPLOYMENT COMPENSATION AND EMPLOYMENT SECURITY ADMINISTRATION

On page 5, line 9, strike out "$305,000,000" and insert "$316,800,000".

COMPLIANCE ACTIVITIES, MEXICAN FARM LABOR PROGRAM

Strike out lines 16 through 20 on page 8, and substitute the following:

SALARIES AND EXPENSES, MEXICAN FARM LABOR PROGRAM

"For expenses, not otherwise provided for, necessary to carry out the functions of the Department of Labor under the Act of July 12, 1951 (65 Stat 119), as amended including temporary employment of persons without regard to the civil service laws, $2,250,000, of which $910,600 shall be derived by transfer from the farm labor supply revolving fund: Provided, That reimbursement to the United States under agreements hereafter entered into pursuant to section 502 of the Act of October 31, 1949, as amended (7 U. S. C. 1462), shall include all expenses of maintaining and operating migration and reception centers, including salaries and expenses of regular and other employees engaged therein.

BUREAU OF LABOR STATISTICS

SALARIES AND EXPENSES

On page 10, line 11, strike out "$7,332,000" and insert "$7,572,000".

Secretary MITCHELL. Thank you.

The various witnesses who will appear before you will present reasons for the restoration of the reductions. I want to say a word about a couple of these items.

COMMITTEE REPORT

The House did not again go along with our request for the Bureau of Apprenticeship and Training. The report of the committee states that:

> The committee has reason to believe that the people concerned are much more nearly in agreement than was the case a year ago. It is still obvious, however, that all the differences have not yet been resolved. The committee is convinced that there is a great need for more and better training activities and is encouraged by the progress that has been made in working out a mutually satisfactory and integrated program in the broad field of vocational education and training. But to start this proposed program while there are still disagreements might easily do more harm than good in the long run.

We appear to have convinced the committee that there is need for more and better training activities. Yet the appropriation increase has been withheld on the basis that there is not entire agreement between the Department and some vocational education people. After last year's action of Congress, I asked the Under Secretary to assume the responsibility of looking into this matter and working out any disagreements that might exist.

SUPPORT OF PROGRAM AND INCREASES REQUESTED

I have just learned this morning, Mr. Chairman and gentlemen, that Dr. Mobley, the executive secretary of the American Vocational Association, has advised the members of the planning committee and the labor-management relations committee of the AVA, that he supports this program and he supports the increases which we have requested. This is the organization that has had some questions about the operation of this program, and apparently, by virtue of the letter which Dr. Mobley has sent to his planning committee and labor-management relations committee, the questions that he had about the operations of this program have been satisfied. There appears now to be no conflict with their purpose, and it seems, too, that they have

accepted our thinking that the work we plan will be of benefit to their program. So it would appear that the reservation that the House committee made in its report is now satisfied.

The committee's report also contains some statements with regard to our estimate for grants to States for unemployment compensation and employment service administration that I feel obliged to comment on. This appropriation was reduced by the House committee and by the House $24,300,000 from the request, and the principal basis for this reduction is stated "One important factor that the committee believes was not given sufficient weight in the preparation of the budget, is that the unit costs of handling unemployment claims goes down as the number of claims increases."

I agree with this. It is a problem which the staff of the Department has been working on with representatives from the States to ascertain how an adjustment can be made in the estimates to compensate for this factor.

There has, no doubt, been some speedup in claims operations in the States. They are performing the work at less time than budgeted in some of the functions. In the new application process they are taking applications in less than the time budgeted. However, there are factors which should increase costs in 1959 above those in 1958. For example, some of the shortcuts are not desirable. We should be doing more work on periodic reinterviews and benefit rights interviews. We should take more applications which will be useful for placement. We are creating backlogs of leave and compensatory time off which will have to be paid for next year. That is leave and compensation, compensatory time off for employment security employees. However, we think that out of the $24,300,000 we can justifiably save $12,500,000, but we do need the balance of $11,800,000 restored.

Mr. Chairman and gentlemen, this completes my prepared statement.

(The information referred to during the foregoing presentation follows:)

U. S. Department of Labor

Statement of appropriated funds for 1958, request to Congress, 1959, and 1959 House allowance

	1958 total		1959 request		Change requested over 1958		House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount	Positions	Amount
Office of the Secretary	180	$1,480,000	192	$1,556,000	+12	+$76,000	186	$1,478,000
Working capital fund	118		118				118	
Office of the Solicitor	319	2,321,000	319	2,321,000			319	2,321,000
Bureau of Labor Standards	111	985,000	113	1,004,000	+2	+19,000	113	995,000
Bureau of Veterans' Reemployment Rights	65	542,000	65	542,000			65	542,000
Bureau of Apprenticeship and Training	491	3,600,000	523	3,900,000	+32	+300,000	490	3,600,000
Bureau of Employment Security	753	5,958,000	803	6,300,000	+50	+342,000	790	6,219,000
Mexican farm program	333	2,250,000	333	2,250,000			60	480,600
Bureau of Employees' Compensation	462	2,885,400	476	2,858,000	+14	−27,400	476	2,858,000
Bureau of Labor Statistics	953	7,200,000	1,011	7,572,000	+58	+372,000	971	7,332,000
Women's Bureau	61	462,000	61	462,000			61	462,000
Wage and Hour Division	1,439	10,600,000	1,397	10,500,000	−42	−100,000	1,397	10,500,000
Subtotal	5,285	38,283,400	5,411	39,265,000	+126	+981,600	5,046	36,787,600
Grants to States		292,814,000		329,300,000		+36,486,000		305,000,000
Unemployment insurance—Veterans		61,800,000		19,000,000		−42,800,000		19,000,000
Unemployment insurance—Federal		43,400,000		27,800,000		−15,600,000		27,800,000
Employee's compensation benefits		57,600,000		57,000,000		−600,000		57,000,000
Subtotal		455,614,000		433,100,000		−22,514,000		408,800,000
Grand total	5,285	493,897,400	5,411	472,365,000	+126	−21,532,400	5,046	445,587,600

Statement showing sources of funds from other than general tax revenues

From the Federal unemployment account:	
For the Office of the Secretary	$77,900
For the Office of the Solicitor	53,000
For the Bureau of Employment Security	6,174,400
For grants to States	329,300,000
Total	335,605,300
From the highway trust fund: For the Office of the Solicitor	200,000
From the farm labor supply revolving fund: For the Mexican far program	910,600
From the longshore and harbor workers fund: For the Bureau of Employee's Compensation	47,400
Total	336,763,300
Total appropriation requested	472,365,000
Authorizations from other than tax revenue	336,763,300
Financing required from tax revenue	135,601,700

Unemployment Insurance

Senator Hill. Mr. Secretary, speaking about the unemployment insurance, as I understood your statement, in the beginning what you suggest is that you should be allowed the amounts requested with the idea in mind that if that does not prove sufficient, then you come back and ask for a supplemental.

Secretary MITCHELL. Yes, sir. When we get closer to the fiscal year of 1959.

Senator HILL. When you get nearer to July 1?

Secretary MITCHELL. Yes, sir. We felt that about May 15 or June 1, when we have a clearer picture than we have now of what the unemployment claims may be for fiscal 1959, if it were then justified we would come in for a supplemental. We felt that doing it now would be unwise because we really are not in a position to accurately revise our estimates which we made before.

INITIATION OF LABOR-MANAGEMENT CONFERENCES

Senator HILL. Mr. Secretary, I was interested in your statement about initiating a series of annual conferences of outstanding people in the field of management and labor to discuss and find practical solutions to what the Department can do to meet the emerging problems of the labor force. Just how would these conferences be set up? What persons would constitute this? How would they be selected?

Secretary MITCHELL. Sir, we would look in the management field, to such organizations as the United States Chamber of Commerce, the National Association of Manufacturers, the Committee on Economic Development, and some of the more specialized groups, such as the American Retail Federation, for people from their ranks who could help us to find the solutions. And, on the labor side, we would look to the AFL–CIO and other labor organizations for help in the same manner.

As we see it, the emerging labor force, the problem presented by increasing technological changes, and the movement toward automation, which is going to change job contents considerably, present some real problems to management and labor and to the economy as a whole.

If we are going to do a job in the Department that is not an ivory-tower job, but a practical one, we need the assistance and help of outstanding people in the field to give us advice and counsel.

Senator HILL. Would the $29,375 be just a beginning?

Secretary MITCHELL. Sir, I would say that, initially, in the fiscal year 1959, that amount of money would serve our purpose in this type of consultation and conference successfully. Then, of course, we would have to consider continuing some of these conferences, Mr. Chairman. We just finished one last week, the President's Conference on Occupational Safety, which we ran in cooperation with the National Safety Council and other organizations interested in the safety field. It brings into Washington for 3 days some 3,000 people, who all come at their own expense, either personal expense or expense of their organizations, and for 3 days they discuss ways and means of cutting the accident toll, and, universally, this kind of conference is hailed by both management and labor as being very worthwhile and a proper function of Government.

Senator HILL. Most of those conferences will be held here in Washington?

Secretary MITCHELL. Not necessarily, sir. This type of conference would, I think, be held both in Washington and in selected spots

throughout the country where we would get a firsthand look at local problems.

NEED FOR NONMILITARY DEFENSE PLANNING

Senator HILL. I notice you speak of the need to initiate nonmilitary defense planning to meet the emergency situation, and that, regardless of ODM or FCDA, you feel the Department, to meet its responsibilities, must go forward with this planning. Have you counseled with ODM and FCDA to make certain any planning you might do would not be a duplication of what they are doing? Their whole planning, insofar as possible, would be integrated and tied in together?

Secretary MITCHELL. Yes, sir. We have a continuing liaison with both organizations, and ODM, particularly, has no staff to carry on the detailed planning in the area of possible wage and salary administration, in the area of manpower allocation, all of which are a basic responsibility of this Department. This is work that we do, and no one else does, and there is no conflict or duplication so far as ODM is concerned.

APPRENTICESHIP PROGRAM

Senator HILL. Mr. Secretary, you spoke about your apprenticeship program. I notice in this committee's report last year on the bill for the present fiscal year, the committee stated:

> The Congress was advised that the Department's contemplated plans are authorized by the act creating the Department. But there seems to be some area of disagreement in this connection, and it is suggested to the Department that they submit to the Congress legislative proposals to spell out in very definite terms the program and the authority which they need to embark upon this activity.

Did you give consideration to that recommendation of the committee?

Secretary MITCHELL. We certainly did, Mr. Chairman.

Mr. DODSON. A document was not submitted, but we did give serious consideration to it, and we conferred with our Solicitor on the fact that we have been performing the kinds of functions that this program that you have before you contemplates. We have been performing those functions for years, and moneys have been appropriated for years to carry out those functions. But we did not feel it was necessary to have any additional substantive legislation.

Senator HILL. Do you not think it would have been a good idea to have addressed a communication to the committee to that effect?

Secretary MITCHELL. I think it would, sir; yes. If the committee so desires, we will do so.

Senator HILL. I think you might do so now.

Secretary MITCHELL. Yes, sir; we will.

(The communication referred to follows:)

UNITED STATES DEPARTMENT OF LABOR,
OFFICE OF THE SECRETARY,
Washington, D. C., April 9, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Departments of Labor and Health, Education, and Welfare and Related Agencies, Committee on Appropriations, United States Senate, Washington, D. C.

DEAR SENATOR HILL: This letter is written in response to your suggestion, at the April 1 hearings on the Department of Labor appropriation, that the De-

partment address to the committee a communication concerning its activities in promoting training programs to improve the skills of the work force. The following statement on the Department's activities in this field includes references to the legal basis which the solicitor has advised me exists for their performance.

The promotion of apprenticeship and other training programs in American industry has been considered to be a part of the Department's responsibility under its organic act "to foster, promote, and develop the welfare of the wage earners of the United States, to improve their working conditions, and to advance their opportunities for profitable employment." In addition, the Department has been given by the act of August 16, 1937, the specific responsibility "to foster and promote the furtherance of labor standards necessary to safeguard the welfare of apprentices, to bring together employers and labor for the formulation of programs of apprenticeship, to cooperate with State agencies engaged in the formulation and promotion of standards of apprenticeships, and to cooperate with the Office of Education" of the Department of Health, Education, and Welfare "in accordance with" the provisions of title 20, United States Code, section 17, relating to "studies, investigations, and reports concerning trades and industries, for the purposes of trade and industrial education."

As the committee is aware (R. S. 161 (5 U. S. C. 22)) and Reorganization Plan No. 6 of 1950 (64 Stat. 1263) authorize the Secretary of Labor to assign the performance of any of the Department's functions to such officers, agents, and employees of the Department as he may deem appropriate. The specific functions set forth in the 1937 act for the promotion of training through apprenticeship had for some years been assigned to the agency of the Department known as the Bureau of Apprenticeship. The Bureau was also assigned the performance, on a limited scale, of other functions in the promotion of training within industry which it could perform economically because its activities in connection with apprenticeship brought its personnel in contact with persons and organizations who were also interested in the training of journeymen in new skills, in supervisory training, and in training in skilled occupations not considered apprenticeable. Appropriations were made to the Department for the performance of all these functions.

It was with this background that an order of the Secretary of Labor was issued in December 1956, which reestablished this operating bureau as the Bureau of Apprenticeship and Training in order to give new emphasis to those functions of the Department in promoting the training of workers in industry which extend beyond apprentice training. Since these functions are authorized by the Department's Organic Act and had been performed by the Department on a scale commensurate with the appropriated funds available for such purposes, and since the Secretary of Labor is authorized by law to designate the agencies of the Department which will perform particular functions, no additional legislation was considered necessary and none was requested of the Congress.

Questions raised concerning functions of the Bureau of Apprenticeship and Training have indicated a need for a better understanding of the actual nature of the functions performed by this Department in the training field. The Department does not train workers and does not encroach on educational programs. Its programs are concerned with promotion of apprenticeship and other training, and its activities are directed at stimulating the training of workers by industrial and other groups in whose field such training would naturally fit. I am inclosing an explanatory statement made public last year, which discusses the nature of the functions performed through this Bureau and explains in more detail how these functions are coordinated with vocational education and with employee training conducted by those persons and agencies having the direct responsibilities for such activities.

I trust that this letter with its enclosure will provide the information desired by the committee. If we can be of further service, please let us know.

Sincerely yours,

JAMES T. O'CONNELL,
Acting Secretary of Labor.

UNITED STATES DEPARTMENT OF LABOR,
OFFICE OF THE SECRETARY,
Washington, May 7, 1957.

FUNCTIONS OF TRAINING SERVICE TO SUPPLEMENT APPRENTICESHIP

The Department of Labor has recently added the words "and Training" to the title of the Bureau of Apprenticeship. This change in the designation

of the Bureau of Apprenticeship to that of Bureau of Apprenticeship and Training is intended to give new emphasis to certain functions which the Bureau has been performing in the stimulation of training by industry through apprenticeship and other programs. These include the stimulation of journeymen training, supervisory training, and training in skilled occupations in industry which are not considered as apprenticeable. The Bureau's program is designed to encourage industry to develop and improve all worker skills.

Representatives of the Bureau working with labor, management, and vocational education will continue to stimulate and encourage industrial establishments to make personnel inventories of their skilled work force for the purpose of determining replacement needs in their skilled occupational areas caused by normal turnover and contemplated expansion. These manpower requirements are determined on the basis of present needs and estimates based on short- and long-range projections. Representatives of the Bureau assist industry in making these determinations and recommending training programs that have proven to be successful.

Training is the responsibility of industry. Off-the-job instruction is the responsibility of vocational education. Vocational education has the important role of providing training other than that conducted by industry on an on-the-job basis.

The Department of Labor will not conduct training programs. Its representatives in the Bureau of Apprenticeship and Training will continue to encourage and stimulate management and labor to establish or improve apprenticeship and other programs. They will recommend the use of existing training facilities in the community, as well as on-the-job programs. Continued emphasis will be placed on the development of apprenticeship programs, which have the highest priority.

The promotion of these training activities by the Department of Labor is important to the discharge of its basic responsibility under its organic act "to promote the welfare of the wage earners of the United States, improve their working conditions and advance their opportunities for useful employment."

JAMES P. MITCHELL.

Senator HILL. Senator Thye.

FARM PLACEMENT ACTIVITIES

Senator THYE. There was just one question, Mr. Chairman, which I had in mind other than some of the questions that you have related to, and that is to be found on page 6 of your statement, Mr. Secretary. The reference to the fact that better knowledge of local economic situations and that job requirements is needed; and improvement in the farm placement activities is needed.

I wonder what improvements you had reference to.

Secretary MITCHELL. Mr. Goodwin will speak in detail to that, Senator. But, as you may recall, the Department of Agriculture, in cooperation with the Department of Labor, has been endeavoring to find either part-time or full-time jobs for people in rural communities. That is one area of this farm placement program. In addition, the seasonal needs of farmers and ranchers need to be met with a greater degree of accuracy so far as the seasons are concerned throughout the employment service.

Senator THYE. This is not referring specifically to things such as the Mexican labor.

Secretary MITCHELL. No; this is a domestic farm placement.

Senator THYE. Are you taking steps and making a study to determine how you can assist the man that is unemployed today in some of your industrial areas in getting transferred to a rural job if that is his desire? Are you helping in that respect?

Secretary MITCHELL. As you know, Senator, we have an interstate program so that the employment security offices of the various States

exchange job requirements or job orders. When they cannot be filled locally, they are farmed out to other States to see if they can be filled.

Senator THYE. Have you made a study to try to determine how you can improve upon the farm job placement? There have been some complaints that a man has been sent out on jobs and there has been no check on the person, and that he came on the job and an embarrassing situation would develop that he was either wanted by the sheriff or he had not performed suitable service.

Secretary MITCHELL. He was not qualified.

Senator THYE. He might be qualified, but his personal contact was such that you would not want him. They did not want him.

And the second was that he might be wanted by the sheriff in some other State, and he would come recommended as having been employed at such and such a place in such a town and performed suitable services or commendable service, and you found that he had not been so employed and that the placement service had not even given it a check and had not called to ascertain whether the man was reporting facts or not.

Secretary MITCHELL. Senator, I am sure that in a nationwide operation of this kind when there are hundreds of thousands of placements, our State offices could make errors of that kind.

Senator THYE. Are they permitted to do some long-distance telephoning to ascertain whether the applicant has told the truth about where he was last employed?

Secretary MITCHELL. They are directed to not unnecessarily use the long-distance phone, but they are directed to check to the reasonable extent that is possible on the claims made, on what the applicant says. That is part of the normal job that they have.

Senator THYE. That is what I thought, but I found that it was not always carried out.

Secretary MITCHELL. If you could give us a specific area we would endeavor to see that the administration is jacked up a bit.

Senator THYE. In other words, what you say is that they are supposed to do it. If they have failed to do it, they just failed in their responsibility.

Secretary MITCHELL. That is right, within reason.

Senator THYE. Thank you, sir.

Senator HILL. Senator Smith.

Senator SMITH. I haven't any questions, Mr. Chairman.

Senator HILL. Senator Dworshak.

REQUESTED AMENDMENT OF HOUSE ACTION ON MEXICAN LABOR

Senator DWORSHAK. Mr. Secretary, I have been reading the House report on the Mexican labor program, and I notice in the committee print table that an amendment is requested to strike out the House figure and allow the budget estimate. Do you care to clarify that, or do you want to have that taken up later by some other person?

Secretary MITCHELL. Senator, the House committee recommendation was altered substantially by action on the House floor—the provision of funds for salaries and expenses to be derived by transfer from the revolving fund was eliminated on a point of order. Our request for amendment contemplates the striking out of the provision now

contained in the bill and the insertion in lieu thereof our budget estimate.

Senator DWORSHAK. What is the nature of that program transfer which apparently was deleted on the House floor?

Secretary MITCHELL. The nature of the transfer was that certain of the administrative expenses for the Mexican farm program which had been in the past paid from general funds were to have been paid under the proposal from the revolving fund, which comes from a fee that employers pay for the service rendered.

The House, on a point of order, struck out that portion of the budget which would have charged to the revolving fund general administrative expenses which in the past have always been paid from direct appropriation.

Senator DWORSHAK. What have those fees been used for in the past? Have they been operating with a revolving fund heretofore?

Secretary MITCHELL. Yes, sir; they have.

Senator DWORSHAK. How was that money expended? Locally?

Secretary MITCHELL. Mr. Dodson can tell you how the money was expended in the revolving fund.

Mr. DODSON. The revolving fund money in the main is to pay for the transportation cost, the feeding and housing costs of the worker until the farmer picks up the worker and returns him to the center. The charges which are made to the revolving fund are for the salaries and expenses of full-time and temporary employees of the Federal Government operating the program.

Senator DWORSHAK. The way the House acted upon it in the appropriations, the amount of $480,600 was provided, and, according to the report, that was earmarked more or less to be used by the Department for insuring compliance.

Secretary MITCHELL. That is right.

STATUS OF PROGRAM

Senator DWORSHAK. Based on the House action, what is the status of this program?

Mr. DODSON. At the present time we have $480,000 to do a $2 million plus job, and we are certainly going to need some changes made if we are to administer it.

Senator DWORSHAK. If the Senate does not make any changes in the House appropriation, then what will be the added responsibilities, if any, evolving from the revolving fund under the administration of the local officials?

Mr. DODSON. If there are no changes made, $480,000 will be all that is available for administering this program, and we just could not operate the program.

Senator DWORSHAK. The point I cannot get clear is this: In the past fees have been paid into a revolving fund which was used to pay transportation and housing costs for these Mexican workers until they were employed by farmers in various sections.

Mr. DODSON. That is right.

Senator DWORSHAK. If that were true, then why was it necessary for the Federal Government to spend approximately $1 million, $1½ million, for a similar purpose?

Mr. DODSON. The Federal Government has a responsibility for certifying need for bringing in the Mexicans. It has a responsibility for ascertaining that the wages paid will not reduce the wages in the area, and then there is the compliance enforcement program. Then the Federal Government has a responsibility of having a staff at the reception centers, where you have 300 or 400 or a thousand Mexicans coming in, to see that they are housed, fed, and given medical examinations, the referral to the farmers, and that the individual contract for each Mexican is completed. These administrative expenses are not authorized to be paid out of the revolving fund.

Senator DWORSHAK. Will the fees have to be increased materially if the House action is sustained?

Mr. DODSON. I would say that we would have to go to the maximum allowed under the substantive legislation, $15 per worker if the House committee recommendation prevailed. But under the action of the House, we could not operate the program.

Senator DWORSHAK. What has been the practice?

Mr. DODSON. At the present time it is $10.

OUTLOOK ON MEXICAN LABOR PROGRAM

Senator DWORSHAK. Has there been any change recently in the general outlook of the Mexican labor program primarily because of unemployment in this country?

Secretary MITCHELL. Yes, Senator. We feel that this year, beginning this spring and continuing for the balance of the year, in all likelihood the number of Mexicans who will be permitted legal entrance will be decreased because basically the law provides that Mexican labor may only be used when it has been determined that domestic labor is not available, and with the unemployment situation in certain areas we are assuming that more domestic labor will be available, and therefore fewer Mexicans will be brought in.

Senator DWORSHAK. Do you generally approve of that situation of utilizing available local labor prior to bringing in Mexicans?

Secretary MITCHELL. Oh, yes, sir. Our policy in this is that the foreign labor should never come in when domestic labor is available.

Senator DWORSHAK. Do you anticipate any difficulty because the Mexican Government will contend that sending Mexican laborers into this country in the past should be continued now notwithstanding the availability of local white labor?

Secretary MITCHELL. I don't anticipate any difficulty. There will still be a need for considerable numbers of Mexicans in certain areas.

Senator DWORSHAK. There is a certain kind of work that they alone can do efficiently?

Secretary MITCHELL. Yes, sir.

Senator DWORSHAK. However, there is some farmwork that can be done probably in an efficient manner by unemployed people in agricultural areas?

Secretary MITCHELL. Yes, sir.

Senator DWORSHAK. You believe that?

Secretary MITCHELL. We believe so, and we certainly will take great pains to see that foreign labor needs are not certified so long as there is domestic labor available.

Senator DWORSHAK. Then to a certain extent you are in accord with some of the reductions in the overall appropriation made by the House because, while you still have certain responsibilities, there will not be, obviously, as many Mexicans imported as in the past?

Secretary MITCHELL. There will not be as many Mexicans employed as there have been in the past. How many fewer depends on the needs as we develop. I would not want you to get the impression that there could be any dramatic decrease in our administrative load because, for example, last year there were supplied about 450,000 Mexicans, approximately.

Senator DWORSHAK. At certain times during the year?

Secretary MITCHELL. Yes, sir.

Suppose that number is decreased by 20,000 or 25,000. The resultant decrease in our administrative cost would not be too great because we still have to maintain the camps, we still have to maintain the process, and where a farmer might have used 25 Mexicans and he has cut down to 20, nevertheless the administrative work in connection with that is almost the same.

TOTAL EMPLOYEES FOR MEXICAN FARM PROGRAM

Senator DWORSHAK. How many employees do you have in the Department and in the field assigned to this work?

Mr. DODSON. Our request for 1959 is 333 employees for this Mexican farm program.

Senator DWORSHAK. What has been the peak at any time in the past few years?

Mr. DODSON. We started in 1952 with 272; in 1953, 317; 1954, 221; 1955, 227; 1956, 234; and 1957, 340.

Senator DWORSHAK. What you are requesting for 1959?

Mr. DODSON. 333.

Secretary MITCHELL. May I point out, Senator, that part of this problem, seeing to it that domestic workers are fully employed before foreign workers are admitted, depends in large measure on the adequacy of administration, and it is conceivable that in an attempt to reduce the number of Mexicans we would have to put more money into administrative areas than we might otherwise do, because if it is not policed and controlled and the certifications of the availability of the domestic workers made properly, more Mexicans would result, if it were not closely watched.

Senator DWORSHAK. Does your department police the wetback phase of that?

Secretary MITCHELL. No, sir.

Senator DWORSHAK. Or is that the Department of Justice?

Secretary MITCHELL. That is the Immigration and Naturalization Service; yes, sir.

Senator DWORSHAK. Have you had much difficulty from that source recently?

Secretary MITCHELL. In the last 3 or 4 years the wetback problem has considerably decreased, and it has resulted, of course, in increasing the number of so-called legal Mexicans which have come in.

Senator DWORSHAK. Do you anticipate there will only be a decrease of about 20,000 from the number who came in in fiscal year 1957?

Secretary MITCHELL. I could not make any forecast in numbers. I was trying to point out that even with a decrease you would still have the same administrative problem.

Senator DWORSHAK. Mr. Secretary, I am sure that, in view of the fact that you fully appreciate the various aspects of this overall program, the Department will do everything possible to insure an adequate supply of farm labor, giving full recognition to the need of employing available local labor instead of bringing in Mexican labor.

Secretary MITCHELL. That is our aim; yes, sir.

Senator DWORSHAK. Thank you.

ESTIMATED TOTAL OF IMPORTED LABORERS

Senator HILL. This year, Mr. Secretary, your number brought in was not as great as you estimated. Is that not correct?

Mr. DODSON. Our estimate for fiscal year 1958 was 490,000.

Senator HILL. For this year.

Mr. DODSON. Yes, sir.

Senator HILL. However, you did not reach your estimate, did you? You have not, have you?

Mr. DODSON. No, sir. But 441,000 is the adjusted figure as of the latest information that we had at the time we prepared this material.

Senator HILL. How many did you estimate altogether?

Mr. DODSON. We estimated originally that 490,000 would be brought in during 1958 fiscal year and at the beginning of that year we revised it to 441,600. I don't believe we are going to quite reach that estimate.

Senator HILL. How many short of your estimate do your figures show?

Mr. DODSON. I anticipate we are going to run around 435,000.

Senator HILL. Could you get the latest figure and supply it for the record?

Mr. DODSON. Yes, sir.

(The information referred to follows:)

The latest estimate is 435,000.

DEMAND FOR MEXICAN LABOR

Secretary MITCHELL. I think it should be pointed out, Senator, that beginning in April and May, which is still within this fiscal year, is the area of our greatest demand in some sections for Mexican labor. So anythng we give now until the final figures come in would be an estimate.

Mr. DODSON. I want to correct what I said. What I gave you was workers received. Sometimes we have to send some of them back. in 1957 it was 450,000 that we contracted. It is 435,000 we are estimating for this year.

Senator DWORSHAK. Are those figures on a fiscal or calendar-year basis?

Mr. DODSON. Fiscal year.

Senator THYE. You do have this problem: There are some jobs which the ordinary American worker would not take because it is stoop labor, such as the seasonal carry through on sugar beets and on onions to which the average American worker, though he be unem-

ployed, is not accustomed. He would not be apt to be on his knees as he would in an onion patch or thinning out sugar beets or topping them.

Mr. DODSON. There is that problem.

Senator THYE. So, no matter what you have in unemployment, you might not be able to fill the entire manpower pool that would be needed for the agricultural field by reason of the sort of work.

Mr. DODSON. That is right.

Secretary MITCHELL. Plus one other thing, Senator—geography. The unemployment in large measure is in our industrial centers.

Senator THYE. That is correct.

Secretary MITCHELL. The demand for Mexican labor is largely concentrated in our Southwestern and Western States with a diminishing number as you go north, so that the unemployed automobile worker in Detroit would be difficult to place in Arizona.

Senator THYE. Even if the onion field was lying right within the vicinity of Detroit, it is a question of whether you would take the industrial worker and put him out in an onion patch.

Secretary MITCHELL. That would be a question; yes, sir.

Senator DWORSHAK. Walter Reuther would not let you do that.

Senator THYE. We use Mexican workers in the State of Minnesota. We use them both in the sugar beet and the onion fields.

Senator HILL. According to the 1958 budget, your estimate for 1957 was 480,000. I believe your latest figure is 450,000.

Mr. DODSON. Workers used was 450,162.

Senator THYE. For 1957 it was 30,000 under the estimate, and then, according to the budget, the estimate for 1958, this fiscal year, was 490,000, and I believe you said your estimate as of now is 435,000.

Mr. DODSON. That is right.

Senator HILL. Are there any other questions? Senator Ives?

GRANTS TO STATES

Senator IVES. I would like to turn to the Secretary's statement on page 8, if I may, at the bottom paragraph where he refers to the appropriation reduction of $24,300,000.

Secretary MITCHELL. Yes, sir.

Senator IVES. If I am not mistaken, I think all of this money is in the Department for this purpose originally coming from the States; does it not? From the employers?

Secretary MITCHELL. It comes from a Federal tax.

Senator IVES. I know something about it. Where they are paying 3 percent the Federal Government gets three-tenths of 1 percent.

Secretary MITCHELL. That is right. It is a Federal tax.

Senator IVES. It comes originally from the States.

Secretary MITCHELL. Yes.

FORMULATION OF BUDGET REQUEST

Senator IVES. I would like to know where you get these figures that you have here. Turning to this large sheet, you have grants to States, $344 million for 1959 was requested of the Bureau of the Budget, $329,300,000 was the budget estimate for 1959, and $305 million was the House allowance. I would like to ask one thing. Let's get to this

budget request. How is that made up? How do you get that? Does each State indicate what it thinks it is going to need?

Secretary MITCHELL. This involves a complex exercise, Senator. It is based upon a number of factors among which are the number of applicants, projected or estimated in each State, the minutes it requires to interview or place an applicant, the minutes it requires to file, accept, and pay out an unemployment compensation payment, and they are all figured on a formula basis in consultation with the States.

Senator IVES. With the individual States?

Secretary MITCHELL. Yes, sir.

Senator IVES. Separately?

Secretary MITCHELL. Yes, sir. These figures are arrived at, then, after application of an agreed-upon formula as to workload and they are constructed, as I said, from individual conferences with the various States.

Senator IVES. The reason I raise this question is because I know New York over the years has felt it has always been shortchanged on this. You probably know something about that. As a result of that, we have had an ineffective administration some of the time of our unemployment insurance law in New York. We had a lot of people drawing unemployment insurance that had no business getting it, just because they could not make the proper check on the thing. In other words, it is a case of being penny wise and pound foolish.

Let's take New York as an example, because New York is where the main complaints come from, certainly as far as I am concerned. I imagine that Senator Potter has the same thing in Michigan, though, or something very similar to it.

With respect to the amount that is allowable for New York here out of $329,300,000, for example, how much in New York supposed to get out of that?

Mr. DODSON. I do not have the State figures here. When the Bureau of Employment Security appears they will have all the detail with regard to the individual State allotments and the basis they have used to arrive at it.

Senator IVES. To arrive at this?

Mr. DODSON. Yes.

Senator IVES. It would be very interesting if we could get some witnesses from States on these things to see how they compare.

I am very interested in this thing because we have not had anywhere nearly enough in past years. I do not know about last year. I would not be surprised if it were all right. I have not had too much complaint recently. However, this racket has developed in New York, and I expect it has developed in other States.

ACCURACY IN DETERMINATION OF ELIGIBILITY CLAIMS

Secretary MITCHELL. Senator, when the representatives of the Bureau of Employment Security come here you might want to ask them the whole question of our activities with relation to fraud and activities with relation to determining accurate eligibility of claims, and in the last 3 or 4 years we have put considerable effort into this.

It is my own belief that, by and large, the claimants for unemployment compensation are paid only on the basis of fairly accurate eligibility requirements. You hear stories, of course—I used to hear them—

about the New York State compensation checks going to a fellow in Florida who resides in Palm Beach.

Senator IVES. I heard quite a lot about that at one time.

Secretary MITCHELL. Yes, but I don't think you hear that any more.

Senator IVES. No; I will admit, Mr. Secretary, I think you have done quite a job in cleaning this thing up. But I am still interested to know whether we have a sufficient amount of appropriation here, because the thing that has really caused it is a lack of appropriation on the part of the Federal Government.

Secretary MITCHELL. Sir, I don't think that that is necessarily true. I think you will find that the States are fairly well satisfied with the allocations that have been made.

In answer to your question, we have the 1958 allocation by States here. Of course, that is not the 1959 budget we are considering. In 1958 the allocation to New York State was $36,233,305 exclusive of postage cost.

Senator IVES. That is for the current fiscal year.

Secretary MITCHELL. Yes, sir. However, it doesn't include a supplemental appropriation which was passed for the last quarter of this fiscal year.

Senator IVES. Thank you very much. I will remember to make that further inquiry when that agency shows up. When is that going to be, Mr. Chairman?

Senator HILL. It very likely will be here this afternoon.

NATIONAL LABOR RELATIONS BOARD

Senator IVES. I have one more question I want to raise with the Secretary. I do not want to consume any more time than is necessary here.

The National Labor Relations Board, an independent agency, are going to be heard separately, are they, Mr. Chairman?

Senator HILL. Yes.

Senator IVES. When will they be here?

Senator HILL. They will be here Thursday.

Senator IVES. They are in this budget, however.

Senator HILL. Yes, they are in this budget, and they will be here and they will be heard.

Senator IVES. I want to ask the Secretary about that matter in general because I know he is acquainted with it.

Senator HILL. The Chairman of the Board and other members of the Board, and the General Counsel of the Board will all be here on Thursday, Senator.

Senator IVES. That is rather fresh in my mind because we have been getting so much complaint about it. It is this no man's land area between the Federal Government and the States.

The Supreme Court decision about a year ago decreed that the States could not take on those cases which were not of a State nature, even though the Federal Government refused to take them, and the line is drawn very clearly now, as you know. As a result, there is an area which has grown up in there where there has been a great area for racketeering and a lot of this monkey business which has been disclosed by the McClellan committee. We have some legislation in,

to correct that thing, but it is very doubtful that we will be able to get the legislation passed at this session because I think we are going to have extreme difficulty in getting any labor legislation passed in this Congress.

BOARD UNDERSTAFFED

The one trouble with the National Labor Relations Board is not its insufficiency, as much as it has been accused of that. It is the fact that it is understaffed. That is my understanding of the situation there, and we have gotten all kinds of complaints. We have had complaints on the part of witnesses that they cannot get fast enough action out of the National Labor Relations Board.

As you know from your own experience in the field, the faster you can resolve these questions the more satisfactorily they are likely to be resolved. Are you satisfied that that is the main reason that they are so slow there, because they are understaffed?

Secretary MITCHELL. As you said earlier, Senator, the National Labor Relations Board is an independent agency, and I hesitate to comment on the reasons for any alleged administrative deficiencies. I would, however, feel free to comment on the philosophy.

It seems to me that the National Labor Relations Board, even with an unlimited budget and unlimited personnel, would find it difficult to handle expeditiously all of the cases that might come before it because of their broad powers in interstate commerce. I think it is reasonable for the Board to establish a cutoff point, below which they will not take cases. There is some question, and there is some question in my mind, as to whether or not the Board has gone too high in its cutoff point. It could possibly go lower. In that event it would need more money and more personnel to take in the additional cases that would result.

The administration, as you know, has before the Congress now, among other things, a proposal that this no man's problem be eliminated by giving authority to the States to act in matters in that area where the National Labor Relations Board declines jurisdiction.

Senator IVES. That is what I was referring to.

NEED FOR LEGISLATION

Secretary MITCHELL. The way to solve this problem, it seems to me, is to pass that type of legislation. I doubt that you can solve it by expanding this in an unlimited way, the area of operation of the Board.

If I may be allowed this comment, too, I think that much of the labor racketeering that you referred to, which has not been able to be handled, is not racketeering of the kind that would come within a labor-management bill, but is racketeering of a kind which is a violation of local ordinances and local statutes. There are laws against bribery, and so forth.

Senator IVES. In New York City we found quite a number of instances where the situation arose where there was racketeering and all kinds of trouble because no labor relations board could handle the cases. The employers themselves said they could not get any help anywhere. This was beneath the level of the National Labor Rela-

tions Board, and, of course, the State could not touch it under that Supreme Court decision.

Secretary MITCHELL. This has only developed within the last year.

Senator IVES. I know, but a lot of this is the last year; and prior to that time, of course, there was a limit beyond which they could not go, and there always has been that no man's land. That is not new.

Secretary MITCHELL. Of course, Johnny Dio was an example in New York of a lack of law enforcement.

Senator IVES. That is a criminal situation there. I am not talking about that primarily. I am talking about some other cases that arose there. I just wanted to get your slant. I am glad to get it.

You feel that by increasing the staff of the National Labor Relations Board by any amount, one might want to, they could not take on much more than they are already taking? Is that your idea, Mr. Secretary?

Secretary MITCHELL. No, sir. I said that you could increase it in an unlimited way in personnel and money and, because of the broad powers under the law which the Board has now in interstate commerce, it would be, if not impossible, a very difficult job to do.

Senator IVES. That is what I mean.

Secretary MITCHELL. Yes, sir. I do think that the Board might well consider lowering its cutoff point so as to embrace more than they do now, and this is a matter for Board policy, not mine. I am merely voicing an opinion. In that event, more appropriations would be needed.

Senator IVES. I do not imagine you are acquainted with the needs of the Board at the present time. The appropriations allowed here, the appropriations recommended by the budget, and any of those things you do not know anything about?

Secretary MITCHELL. No, sir.

Senator IVES. I notice the House has taken off $600,000, which I assume is altogether unwarranted in the light of what we run into. I think they need more rather than less.

Secretary MITCHELL. I would think so.

Senator IVES. Thank you very much.

Thank you, Mr. Chairman.

Senator HILL. Senator Potter?

FORMULA FOR GRANTS TO STATES

Senator POTTER. Mr. Secretary, did I understand you to say that the Federal Government, your office, in determining the amount of the grants to the States, does that on an individual basis of negotiation with the States?

Secretary MITCHELL. Individual discussion with the States on the basis of a formula which applies to all States as to how long it takes to interview an applicant. And it is a very precise tool that is used. And, as a result of the application of that tool, based upon the State's estimate of the number of applicants it is going to have, an amount is decided upon.

Senator POTTER. Is the formula of a flexible nature? I have run into the same problems that Senator Ives has mentioned. Some of our States, particularly some of the more industrial States, have felt that they did not have enough funds to do an effective job, and I was wondering if it were an arbitrary decision or arbitrary formula that

the Federal Government imposes upon the States. Or is it a matter of negotiation with the States based upon their needs?

Secretary MITCHELL. Senator, we are not arbitrary. This is a Federal-State program and we so regard it. The States' needs are taken into consideration, and the formula is flexible. However, I would not want to leave you with the impression that we don't exercise some judgment with which the State may not agree in some cases.

UNEMPLOYMENT IN MICHIGAN AND NATION

Senator POTTER. Mr. Secretary, while you are here I would like the indulgence of the chairman to ask you about the unemployment problems that we are now confronted with. In the State of Michigan I understand about 2,500 a week are exhausting their unemployment benefits. What are the national figures on that?

Secretary MITCHELL. As to exhaustion of benefits?

Senator POTTER. Yes.

Secretary MITCHELL. We anticipate that for the calendar year 1958 there will be approximately in the system about 2.3 million people who will exhaust their benefits, and that is the reason, Senator, that the President has proposed an extension of unemployment compensation benefits beyond that now allowed by the States, in order to meet the need that is very apparent of these people who will have exhausted their benefits.

Senator POTTER. I wish to commend you and the President for the proposal that you have submitted, for this reason: That it seems to me that it is very essential that you get the benefits in the hands of the people who are unemployed and have exhausted their benefits as quickly as possible. This is no time to enter into a philosophical debate as to whether Federal standards should be imposed that are not now imposed, as to which ways and duration. That is a question to be considered in permanent legislation.

But we are faced with an emergency problem, at least we are in my State, and I sincerely hope that Congress will act on the recommendations that have been proposed, and leave the lengthy debate for a permanent type of legislation, if the program is to carry out the objective that I want to see, and I think which you want to see, to get the benefits in the hands of those that are unemployed who have exhausted benefits as quickly as possible.

Secretary MITCHELL. Senator, I testified on Friday before the House Ways and Means Committee on this very point, and I stated that it was the intent of the administration to see to it that the money was provided quickly, simply and unencumbered, in terms of the simplest, most effective program that we could devise.

The program that we presented is one that does less damage or no damage to the Federal-State system, and it meets an immediate, current need which I think the people of the country expect to be met.

Senator POTTER. You recognize that imposing or changing the Federal standards, particularly as to the ratio as to rates, always presents many controversial problems in the Congress, and, irrespective of the merits of whether Federal standards should be imposed, I hate to see legislation that is badly needed bogged down with that type of debate when the immediate need is so urgent.

Thank you, Mr. Chairman.

Senator HILL. If there are no other questions, Mr. Secretary, we certainly want to thank you for your statement here this morning. We appreciate it very much.

We will now hear from the Under Secretary, the Honorable James T. O'Connell.

OFFICE OF THE SECRETARY

STATEMENTS OF JAMES T. O'CONNELL, UNDER SECRETARY OF LABOR; J. ERNEST WILKINS, ASSISTANT SECRETARY FOR INTERNATIONAL LABOR AFFAIRS; JAMES E. DODSON, ADMINISTRATIVE ASSISTANT SECRETARY; AND V. S. HUDSON, ASSISTANT TO ADMINISTRATIVE ASSISTANT SECRETARY

SALARIES AND EXPENSES

[Salaries and expenses:] For expenses necessary for the Office of the Secretary of Labor (hereafter in this title referred to as the Secretary), including payment in advance when authorized by the Secretary for dues or fees for library membership in organizations whose publications are available to members only or to members at a price lower than to the general public; and purchase of uniforms or allowances therefor, as authorized by the Act of September 1, 1954, as amended (5 U. S. C. 2131) [: $1,480,000, of which not more than $180,000 shall be for international labor affairs: *Provided*, That the limitation of $154,490 for international labor affairs appearing in the Department of Labor Appropriation Act, 1957 (70 Stat. 423) is increased to $159,490] *$1,556,000.*

Amounts available for obligation

1958 actual appropriation	$1,480,000
Deduct nonrecurring items: Rent	—50,000
Revised base 1958	1,430,000
1959 budget estimate	1,556,000
Change requested for 1959	+126,000
House allowance for 1959	1,478,000
House changeover revised base, 1958	+48,000

Obligations by activities

	Revised base, 1958		Budget estimate, 1959		House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Executive direction	26	$296,975	28	$344,100	26	$297,525
2. Program evaluation	28	256,655	32	284,040	30	269,615
3. International labor affairs	19	180,000	25	230,000	23	213,000
4. Central information, personnel, library, fiscal services	107	696,370	107	697,860	107	697,860
Total	180	1,430,000	192	1,556,000	186	1,478,000

Obligations by objects

	Revised base 1958	Budget estimate 1959	House allowance
Summary of personal services:			
Total number permanent positions	180	192	186
Full-time equivalent of all other positions	None	None	None
Average number of all employees	180	192	186
Direct obligations:			
Personal services	$1,218,770	$1,304,873	$1,261,180
Travel	21,800	26,625	21,800
Transportation of things	1,000	1,000	1,000
Communication services	18,850	18,850	18,850
Printing and reproduction	5,200	22,700	5,200
Other contractural services	81,880	90,955	81,880
Supplies and material	3,500	3,500	3,500
Euqipment	3,000	3,000	3,000
Grants, subsidies, and contributions	76,000	84,497	81,590
Total	1,430,000	1,556,000	1,478,000

Summary of new positions

Office of the Under Secretary:	
1 GS–15 Special assistant—emergency program	$11,610
1 GS–7 Secretary	4,525
Office of the Administrative Assistant Secretary:	
1 GS–14 administrative services officer	10,320
1 GS–12 fiscal accountant	7,570
1 GS–5 clerk-stenographer	3,670
1 GS–4 clerk-stenographer	3,415
Office of the Assistant Secretary for International Labor Affairs:	
3 GS–14 area specialists	30,960
1 GS–11 ILO operating officer	6,390
2 GS–5 clerk-stenographers	7,340

Summary of changes

	Positions	Amount
1958 actual appropriation	180	$1,480,000
Deduct nonrecurring items: Rent		−50,000
Revised base, 1958	180	1,430,000
1959 budget estimate	192	1,556,000
Change requested for 1959	12	+126,000

	Budget estimate, 1959		House allowance	
	Positions	Amount	Positions	Amount
Increases:				
For mandatory items:				
Retirement contribution annualization rate of 6.5 percent in 1959 and 6.25 percent in 1958		$2,920		$2,920
Subtotal		2,920		2,920
For program items:				
Provide for direction and coordination of emergency operations program	2	17,200	None	None
Provide for strengthening and improving administrative management and fiscal control programs	4	26,775	2	12,350
Provide for extending international area coverage and improving ILO participation programs	6	49,730	4	32,730
Provide for initiating series of annual conferences for the Secretary	None	29,375	None	None
Subtotal	12	123,080	6	45,080
Total increases	12	126,000	6	48,000

Summary of changes

	Budget estimate, 1959		House allowance	
	Positions	Amount	Positions	Amount
Decreases:				
Nonrecurring rental costs	None	$50,000	None	$50,000
Net change	12	+76,000	6	−2,000

EFFECT OF HOUSE ACTION

Activity No. 1. Executive direction

The House has allowed a total of 26 positions and $297,525 which is an increase of $550 to cover the cost of the mandatory annualization of retirement on the base budget.

The House denied an amount of $17,200 and 2 positions to establish direction and coordination of emergency programs.

The House denied an amount of $29,375 to cover the cost of printing, travel, and visual exhibit work and other expense proposed in initiating an annual series of conferences with an outstanding group of management, labor, education, etc., for the purpose of developing or improving the Department's programs to appropriately conserve and utilize all available manpower to the fullest possible extent. We deem this essential to the future of our national economic and social welfare.

Activity No. 2. Program evaluation

The House allowed 30 positions and $269,615. This includes an increase over 1958 of 2 positions and $12,350 for improving needed fiscal control work of the Administrative Assistant Secretary and $610 for mandatory annualization of retirement contributions for the 1958 base staff of 28 positions.

The House did not allow an additional 2 positions and $14,425 which was requested to establish supervisory and administrative control over the office service, procurement, duplicating, and fiscal functions of about 145 people. These 4 divisions need more day-to-day supervision than the Administrative Assistant Secretary can give and in effect recreates the old Chief Clerk job which the Department had about 15 years ago.

Activity No. 3. International labor affairs

The House has allowed 23 positions and $213,000. This is an increase of 4 new positions and $32,730 and $270 for mandatory annualization of retirement contribution over the 1958 appropriation.

The House allowance will not permit adding funds requested for 2 positions at $15,000 and $2,000 for travel.

The 1959 estimate contained a request for 3 additional area specialists—1 each to cover Europe, Latin America, and the Far East; 1 ILO specialist; and 2 clerk-stenographers. With the funds allowed 2 area specialists, the ILO specialist and 1 clerk-stenographer can be added to the staff. This means that either one of these vital areas cannot be covered or that 2 areas will have to be assigned to 1 staff specialist. Full-time area coverage by a specialist in that area is of prime importance to the successful and efficient coverage of international problems.

In addition the House has imposed a dollar limitation on the amount which may be spent for international labor activities. Dollar limitations within specific apprpriations make administrative flexibility impossible in instances where the program is subject to possible major changes in workload or in shifts of emphasis.

Activity No. 4. Central, information, personnel, library, and fiscal services

The House allowed the additional amount requested of $1,490 to cover the mandatory annualization of retirement costs on the 1958 base of 107 positions.

Office of the Secretary

Mr. O'Connell. Mr. Chairman, I would just like to take a few minutes, with your permission, to elaborate on the Secretary's comments with regard to his own office. I have a statement here which I would like to read from.

Senator Hill. Go right ahead, sir.

Mr. O'Connell. For the Office of the Secretary we are now asking for $1,538,800 for 1959. This is $60,800 more than allowed by the House but is $17,200 less than what we originally requested for 1959.

We have reduced the original budget estimate by $17,200 to eliminate two new positions requested for my office. These positions were wholly related to the emergency operations program. In view of the firm position of the House and of this committee I have eliminated the funds from the request, even though the work to be done is very important and very vital.

POSITIONS REQUESTED

We are requesting for Mr. Dodson's office, which is responsible for all administration and management in the Department, 4 positions and $26,775. Two of these positions are what might be called professional jobs for the purpose of strengthening evaluation and supervision of the financial and departmental service operations.

I might point out in that connection that review of the fiscal operations of the State employment security agencies which were just mentioned, and estimating their needs, is part of the general function of Mr. Dodson's department.

In addition, this staff would make it possible for Mr. Dodson to devote more of his time to other functions. Two positions which were not allowed were for clerical assistants in this general area. The House did allow two positions, but not enough to reestablish fully the work of the chief clerk's position which Mr. Dodson absorbed 15 years ago or which was absorbed in his position. He needs some help.

Senator Thye. Mr. Chairman, might I interrupt at this point?

Senator Hill. Certainly.

Senator Thye. May I make this inquiry? If these clerical positions are disallowed, then what will be the situation of the two assistants that will be allowed? Will they have to do clerical work?

Mr. O'Connell. I think they would be handicapped. We do need additional clerical help.

Senator Thye. That is the point. If you get two high-salaried assistants, and you do not have an adequate clerical staff, then your highly classified assistants will have to resort to some pencil work of their own or wait for the clerical staff. You would be better off to lessen the number of the high-class assistants and give the one that you retain the proper clerical assistance. Is that proper thinking? We have got to make a decision on this request, whether we give you the additional funds or whether we try to get a recommendation from you relative to how you would adjust your staff.

I would hate to see Mr. Dodson do clerical work because he is too valuable in some of the other activities.

Mr. O'Connell. We would, of course, settle for 2 additional people, but I agree it would be preferable to have 1 professional person and 1 clerical assistant.

Senator Thye. You have to justify your request as to where you will get your clerical staff.

Mr. O'Connell. We would like to have the two additional people on the staff. We would agree with you that if we would have half of the staff, 2 people, it would be better to have 1 professional and 1 clerical.

Senator Thye. That would be my thinking, because the professional person would be handicapped if he knew not where he was going to get his clerical assistance from.

Thank you, sir.

Sorry to have interrupted you, Mr. Chairman.

FUNDS FOR ANNUAL CONFERENCES

Mr. O'Connell. I would like to speak further on the point which the Secretary did elaborate on to some degree, and that is our need for $29,375 to initiate a series of annual conferences of various groups in order that the emerging manpower and labor economic problems of the next decade can be presented and both advice and cooperation sought to improve the contribution which the Department and the Federal Government can make toward their solution.

I believe that utilization of the knowledge, experience, and vision of specialists in various fields will be most helpful. This increase does not entail additional positions but will be used to defray costs of developmental material, the payment of travel expenses, and the preparation and reproduction of visual material.

Senator Hill. Give us an illustration of what you mean by "developmental material."

Mr. O'Connell. I would like to explain by referring to the exploratory conference we held with educators. In connection with that meeting, we wanted to discuss with a key group of educators, all over the country and at all levels of education, how the work of the Department and the work of the educators might be better dovetailed, so we called them into conference. Before they met in the conference, we developed certain materials described here as "developmental materials," which include an appraisal of the problem, some setting forth of areas of discussion, a general outlining of where, in general, we felt that the work of the Department and the work of the schools

fit, what some of the manpower problems were ahead which would affect the school problems; and then, using this as a basis for this particular discussion, we worked from that base.

DEVELOPMENT AND DISTRIBUTION OF BOOK, OUR MANPOWER FUTURE

Mr. Chairman, in addition we have done a great deal of work in the general area of our manpower future. We have developed this particular booklet, Our Manpower Future, which everybody on the committee is familiar with and, which discusses what will happen to our manpower skills.

This is a purely factual book with estimates of changes in population and work force between now and 1965.

We have had occasion to distribute over 75,000 copies of this book. It has been presented by various officials of the Department and many people outside of the Department to more than a quarter of a million people. This is the sort of material which we feel we should be able to develop more of, and we should be able to establish forums where people can come and discuss this material and give us their viewpoints, whether they are educators, whether they are people from the management side, or whether they are people from the labor side.

This is the sort of work which we would like to be able to do more of. Also, we would like to be able to bring these people together occasionally, which entails some travel and administrative expense.

Senator SMITH. Mr. Chairman, may I ask a question there?

Senator HILL. Certainly.

Senator SMITH. How are those distributed? You said that 75,000 copies went out. To whom do they go?

Mr. O'CONNELL. They went originally to a group of key labor people, key school people, key industrial people, to various libraries, and, of course, they are on sale.

Senator SMITH. You have a regular mailing list for that distribution?

Mr. O'CONNELL. Yes, ma'am.

Senator SMITH. You do not wait for them to be requested?

Mr. O'CONNELL. We have a set of mailing lists composed of people who have informed us of their desire to receive the Department's publications. We do not always wait for special request, Senator Smith. We hope that the document will be challenging enough so that requests will flow in.

Senator HILL. That has been your experience with that particular document?

Mr. O'CONNELL. Yes, it has, sir.

EDUCATIONAL CONFERENCE

I mentioned very briefly the educational conference which we think was most helpful to us, and I believe, was useful to the education people because we have had a great deal of followup.

Senator HILL. How many educators did you have at that conference?

Mr. O'CONNELL. My recollection tells me 70, but I am not certain.

Note by Department: 55 attended.

Senator HILL. Did they represent all the different fields of education, beginning with the lower grades, and the secondary schools and the colleges and universities and graduate schools?

Mr. O'CONNELL. Within the limits of the physical size of our conference we asked them from all of the geographical areas of the country, all the various levels, higher education down to the elementary schools, the teacher and the administrator. We tried to get a broad cross section of people who are interested in the relationship of education to employment, which is the purpose of our holding this particular conference.

In addition to this education conference, we had a very successful presentation of this manpower look at by the secretary to the business advisory group of the Commerce Department, which is a very high level industrial group.

Senator HILL. Suppose you leave that copy with us, will you?

Mr. O'CONNELL. I will, Mr. Chairman.

INTERNATIONAL LABOR PROGRAM

Mr. O'CONNELL. I would like to leave this part of my discussion here and go on to the international labor program. If you want more information than I can give you, Mr. Wilkins is here to discuss it.

Senator HILL. Secretary Wilkins, would you like to come around and take a seat at the table?

Mr. WILKINS. Thank you, Senator Hill.

Mr. O'CONNELL. For the international labor program we are asking an increase of $49,730 primarily to provide staff to shore up two areas which need strengthening. We are unable to keep up and to evaluate valuable information we get concerning the foreign worker and his attitudes toward United States policy and their execution and we must exert every effort to improve the quality of our participation in the ILP program. This increase will provide for 6 additional positions and $49,730.

The funds which have been allowed by the House will require that either 1 area not be covered or that 2 areas be covered by 1 person. Our experience indicates that there needs to be at least one full-time person assigned to each area of operation. We also need an additional $2,000 for travel and the money limitation on the total amount should be removed as this committee removed it last year.

CONTRIBUTION TO RETIREMENT FUND

The last item in the Secretary's office is mandatory. $2,920 is needed to put on an annual basis the Government's contribution to the employee retirement fund. This was allowed in full by the House.

As we told you last year, there is an item of $50,000 for office rentals which we no longer need and which is reflected as a decrease or partial offset against the increase requested.

If there are any questions you want me to answer, I will be very happy to.

LIMITATION ON INTERNATIONAL LABOR ACTIVITIES

Senator HILL. I think each year the Senate committee and the Senate itself has removed the limitation. Then we have gone into

conference with the House and we have been unable to persuade them to remove the limitation. I suppose you have presented the matter to the House this year?

Mr. O'CONNELL. Yes, sir.

Senator HILL. But you were no more successful?

Mr. O'CONNELL. We are no more persuasive than the Senate.

Senator HILL. But you would very definitely like to have the limitation removed?

Mr. O'CONNELL. Yes, sir.

PREPARED STATEMENT

Senator HILL. Your statement in its entirety will be placed in the record at this point.

(The statement referred to follows:)

STATEMENT OF THE UNDER SECRETARY OF LABOR ON THE 1959 BUDGET ESTIMATE FOR THE OFFICE OF THE SECRETARY

For the Office of the Secretary we are asking for $1,538,800 for 1959. This is $60,800 more than allowed by the House but is $17,200 less than what we originally requested for 1959.

We have reduced the original budget estimate by $17,200 to eliminate 2 new positions requested for my office. These positions were wholly related to the emergency operations program. In view of the firm position of the House and of this committee I have eliminated the funds from the request.

For Mr. Dodson's office we are requesting 4 positions and $26,775, 2 of which are the primary purpose of strengthening evaluation and supervision of the financial and departmental service operations of the Department. In addition this added staff would make it possible for Mr. Dodson to devote more time to his other functions. The other two new positions are for clerical assistance.

The House allowed funds to add 2 positions to strengthen fiscal control of our programs but not enough for the other 2 positions to reestablish the work of the Chief Clerk's position which was abolished about 15 years ago. Mr. Dodson needs to shed some of his detailed responsibilities. He needs to have someone assume the detailed day-to-day supervision of nearly 150 people assigned to various central service activities in the Department.

In 1959 we need $29,375 to initiate a series of annual conferences of various groups in order that the emerging manpower and labor economic problems of the next decade can be presented and both advice and cooperation sought to improve the contribution which the Department and the Federal Government can make toward their solution. I believe that utilization of the knowledge, experience, and vision of specialists in various fields will be most helpful. This increase does not entail additional positions but will be used to defray costs of developmental material, the payment of travel expenses, and the preparation and reproduction of visual material.

The House allowance did not include funds for this purpose. This year the Secretary held a most successful exploratory conference with representative educators from all over the country and officials of the Department of Health, Education, and Welfare, to seek their advice on the Department of Labor's occupational outlook publications, and the many programs which the Employment Service in the States conducts in cooperation with the schools—like testing and counseling groups of people going into the labor market, and finding summer jobs for schoolchildren. In the next fiscal year, we wish to call together representatives of labor and of industry to discuss their angles on other manpower problems. We urgently need funds to prepare effective display materials, pamphlets, and programs to get across our points about the serious manpower problem which the future holds. From these meetings we expect to get concrete suggestions for action to improve our programs as we did from the teachers.

For the international labor program we are asking an increase of $49,730 primarily to provide staff to shore up 2 areas which need strengthening. We are unable to keep up and to evaluate valuable information we get concerning the foreign worker and his attitudes toward United States policy and their execution and we must exert every effort to improve the quality of our participation in the ILO program. This increase will provide for 6 additional positions and $49,730.

The funds allowed by the House will require that either 1 area not be covered or that 2 areas be covered by 1 person. Our experience indicates that there needs to be at least one full-time person assigned to each area of operation. We also need an additional $2,000 for travel and the money limitation on the total amount should be removed as this committee did last year.

The last item of increase is mandatory. Two thousand nine hundred and twenty dollars is needed to put on an annual basis the Government's contribution to the employee retirement fund. This was allowed in full by the House.

As we told you last year there is an item of $50,000 for office rentals which we no longer need and which is reflected as a decrease or partial offset against the increase requested.

I will be glad to answer any questions you may have. Also Mr. Wilkins and Mr. Dodson can furnish more detail concerning their increases requested.

PURCHASE OF AIR-CONDITIONING UNITS

Senator HILL. Mr. Dodson, let me ask this question, please, sir.

Mr. DODSON. Yes, sir.

Senator HILL. Some 2 years ago, I guess it was, we included in the bill authority for the District of Columbia Employment Service to purchase air-conditioning units. The States already had the authority, they possessed it. How has that matter worked out? Do they have the equipment now?

Mr. DODSON. Yes, sir; and we are most thankful for that authority because the building we occupy is one that has a parking lot on each side and has lots of windows in it, and the sun shines on the windows from the east and the west, and it would have been unbearable if we had not been given the authority by the Senate.

We now have a very serious problem confronting us.

Senator HILL. What is that?

SPACE SITUATION

Mr. DODSON. We are outgrowing our space. The unemployment insurance program and the employment service program in the District are housed in two buildings. The building at 17th and F is the operating building where the clientele appear to file claims for unemployment insurance or to make application for work. We now have 5,000 or more people a day coming to that building, and it is really overtaxing it.

We are further faced with the fact that our lease expires in 1960. We have recently had requests from the District of Columbia people, including the president of the Commissioners of the District of Columbia, to see what can be done about getting better quarters for both the employment service and the unemployment insurance activity. The headquarters of the unemployment insurance activity is stationed in the Ford Building down at Fourth and Constitution Avenue. It is an antiquated building and needs a complete renovation. Again, we are outgrowing the size there.

The pressure has brought forth a request that we consider the acquisition of a building here in the District of Columbia on the same basis that the States have. They are allowed to enter into contracts for either constructing or acquiring a building amortizing the cost by using the funds previously going for rental. We are faced with a very serious problem.

Senator HILL. Have you gone into this matter to see if you can get that building for the District, and what would be needed to get it, what is necessary to be done?

Mr. DODSON. I have done some thinking of my own, and I think that we need some legislative authority to authorize us to spend moneys in the District of Columbia for the acquiring of a building similar to the manner in which the States acquire a building. That authority would have to be included in the grants to States appropriation, because all of the expenses of the employment service in the District and the unemployment insurance service is paid from the grants to States appropriation. Many States are building buildings and amortizing them in one fashion or another so that eventually they acquire a building, and then all that we have to pay in the way of expenses are maintenance costs on that building, after we have once paid for the building.

Senator HILL. In other words, instead of the rental continuing on indefinitely, they are using those funds pretty much to amortize out the costs of the building with the ownership invested in the State?

Mr. DODSON. That is right. They are trying to make good business-like arrangements so eventually they get away from the continual rental payment for the space.

Senator HILL. Suppose you submit to us a memorandum stating how you think the law would have to be changed and any other facts that might occur to you in support of such a change.

Mr. DODSON. I would be happy to do so.

Senator HILL. We would be glad to have you do so . With your memorandum, you might also send us a copy of the letter which you received from the District Commissioners in this matter.

Mr. DODSON. All right, sir.

Senator HILL. And any other data that might be pertinent to the matter.

Mr. DODSON. Yes, sir. I would be happy to do any amount of work that is necessary to give you the information that you want.

(The information referred to follows:)

UNITED STATES DEPARTMENT OF LABOR,
OFFICE OF THE ADMINISTRATIVE ASSISTANT SECRETARY,
Washington, April 4, 1958.

Hon. LISTER HILL,
United States Senate, Washington, D. C.

DEAR SENATOR HILL: I am pleased to submit the information which the committee requested regarding the need for the acquisition of a building in the District of Columbia for housing the offices and facilities of the District of Columbia Unemployment Compensation Board and the Public Employment Service for the District of Columbia. It is proposed that the cost of acquiring the building be paid from funds appropriated for grants to the States for the administration of employment security through amortization of the total cost over a period of years similar to the arrangements which many of the States are making to obtain suitable quarters.

Although the unemployment-insurance operations are under the administration of the District of Columbia government and the Employment Service for the District of Columbia is administered by the Federal Department of Labor, they must be coordinated. The total cost of administration for both is paid from the same appropriation, "Grants to States."

The administrative offices of the unemployment-insurance operations are located at 451 Pennsylvania Avenue NW., in the Ford Building. This building contains approximately 30,000 square feet of space and is the property of the District of Columbia. The building is obsolete and unsuitable for unemployment-insurance operations.

There is enclosed a letter addressed to the Director of the Bureau of Employment Security, and signed by Mr. Robert E. McLaughlin, Chairman of the District Unemployment Compensation Board and President of the District of Columbia Board of Commissioners. This letter commits the government of the District of

Columbia to work out an arrangement for the District unemployment-insurance operations to be housed in a Federal building acquired for the Public Employment Service for the District of Columbia.

The Public Employment Service for the District of Columbia and the claims functions of the District of Columbia Unemployment Compensation Board are located in the building at 1724 F Street NW. This is a privately owned building, containing approximately 36,200 square feet of space. The present lease expires on January 30, 1960. We are faced with the probability that if the lease is renewed the lessor will demand an increase in rent. There are between 5,000 and 6,000 public visits to this building daily. The present space is completely inadequate.

Approximately 120,000 square feet of space is needed to accommodate the combined operations of unemployment insurance and employment service for the District of Columbia. This building would be acquired under the same arrangements and subject to the same general conditions as apply when the State employment-security agencies acquire similar buildings for housing their functions.

I believe if the language for grants to States for unemployment compensation and employment service administration is amended to read in accordance with the attachment it will give us sufficient authority to solve this problem.

Sincerely yours,

JAMES E. DODSON,
Administrative Assistant Secretary.

"GRANTS TO STATES FOR UNEMPLOYMENT COMPENSATION AND EMPLOYMENT SERVICE ADMINISTRATION

"For grants in accordance with the provisions of the Act of June 6, 1933, as amended (29 U. S. C. 49–49n), for carrying into effect section 602 of the Servicemen's Readjustment Act of 1944, for grants to the States as authorized in title III of the Social Security Act, as amended (42 U. S. C. 501–503), including, upon the request of any State, the purchase of equipment, and the payment of rental for space made available to such State in lieu of grants for such purpose, for necessary expenses including purchasing and installing of air-conditioning equipment in connection with the operation of employment office facilities and services in the District of Columbia, *and for the acquisition of a building through such arrangements as may be required to provide quarters for such offices and facilities in the District of Columbia and for the District of Columbia Unemployment Compensation Board, subject to the same conditions with respect to the use of these funds for such purposes, as are applicable to the procurement of buildings for other State employment security agencies*, and for expenses not otherwise provided for, necessary for carrying out title IV of the Veterans' Readjustment Assistance Act of 1952 (66 Stat. 684) and title XV of the Social Security Act, as amended (68 Stat. 1130), $305,000,000 of which $10,000,000 shall be available only to the extent necessary to meet increased costs of administration * * *."

GOVERNMENT OF THE DISTRICT OF COLUMBIA,
DISTRICT UNEMPLOYMENT COMPENSATION BOARD,
Washington, D. C., April 3, 1958.

Mr. ROBERT C. GOODWIN,
Director, Bureau of Employment Security,
United States Department of Labor, Washington, D. C.

DEAR MR. GOODWIN: It is understood that the Federal Department of Labor is considering obtaining necessary authority to construct a building in the District of Columbia to be used for the administration of unemployment insurance and employment service in the District of Columbia. It is also understood that the cost of the land and building would be amortized over a period of years from funds appropriated for grants to the States for administration of employment security. It is further understood that this arrangement would provide office space in the District of Columbia in the same manner that the various States are permitted to secure office space for unemployment insurance and employment service administration, using funds made available through this appropriation.

Since the District Employment Service is federally operated and the District Unemployment Insurance is administered by the District of Columbia, the administrative cost of both being 100 percent federally financed, the government

of the District of Columbia is agreeable to working out an arrangement for the District unemployment insurance operations to be housed in the proposed building.

At present, part of the District unemployment insurance operations is located in the Ford Building at 451 Pennsylvania Avenue NW.; the remainder of the operations is consolidated with the employment service in the building at 1724 F Street NW. The rental and maintenance cost of the space in both buildings is paid for from funds appropriated to the Department of Labor for grants to the States for financing the cost of administering employment security.

The Ford Building is inadequate as to size and suitability for unemployment-insurance operations. In any event, the building has outlived its usefulness and should be completely refurbished. The space provided in the 1724 F Street building is also inadequate.

Since the administration of the employment service and unemployment insurance is closely related, a building constructed to meet the needs of the two services in the District of Columbia would increase the efficiency of the operations and it would also contribute to improving the office-space situation in the District of Columbia. If this is done, it is, of course, understood that the total cost will be financed from funds appropriated to the Department of Labor for grants to the States for the administration of employment security and that there will be no cost or charge otherwise to the District of Columbia, as is currently being done for the States.

Very truly yours,

ROBERT E. MCLAUGHLIN,
Chairman, District Unemployment Compensation Board.

Senator HILL. Senator Smith.

Senator SMITH. No questions.

Senator HILL. Senator Ives.

Senator IVES. No questions.

CREATION OF ADDITIONAL JOBS

Senator HILL. Mr. Secretary, let me ask one question. Could the Department furnish this subcommittee with information concerning the number of jobs that could be created by a unit of hospital construction, including not only the site employment, but also jobs created in the building-supply industry and other industries that would benefit from the construction of a hospital?

Mr. O'CONNELL. I think we would give you a very reasonable estimate.

Senator HILL. If you would send that to us, we would certainly appreciate it.

(The information requested appears on p. 144.)

POSITIONS REQUESTED

Senator HILL. Secretary Wilkins, is there anything you would like to add?

Mr. WILKINS. Mr. Chairman, I do not think I need to take the time of the committee. The Secretary and the Under Secretary have both indicated that for our operations in the international labor field we asked for an increase of $49,730 to cover 6 new positions. The House let us have $33,000 of that amount of money. We asked for three additional area specialists and a clerk-stenographer to take care of their work and an additional person in our ILO field with a clerk.

I think I should say to you, Mr. Chairman, that in the last year the Departments of State, Labor, and Commerce have worked together in connection with the ILO work, and that all of this staff work in connection with this work is done by the Department of

Labor. We have been seriously shorthanded on the question of personnel ever since I have been in the Department, and I have complained about it, and there have been some increases, but we still need these six additional jobs to do the kind of job we are expected to do in this area.

I should like to add my word to what Mr. O'Connell has said, that if it is possible, we would like to have the dollar limitation in the act eliminated if possible.

Senator HILL. Any questions of the Secretary? If not, we certainly want to thank you very, very much.

Mr. O'CONNELL. Thank you, Mr. Chairman.

DEPARTMENT OF LABOR

OFFICE OF THE SOLICITOR

STATEMENTS OF STUART ROTHMAN, SOLICITOR; WARD E. BOOTE, ASSISTANT SOLICITOR; JAMES R. BEAIRD, ACTING ASSISTANT SOLICITOR; JOHN J. BABE, ASSISTANT SOLICITOR; HAROLD C. NYSTROM, ASSISTANT SOLICITOR; JAMES E. DODSON, ADMINISTRATIVE ASSISTANT SECRETARY; AND V. S. HUDSON, ASSISTANT TO THE ADMINISTRATIVE ASSISTANT SECRETARY

APPROPRIATION ESTIMATE

SALARIES AND EXPENSES

[Salaries and expenses:] For expenses necessary for the Office of the Solicitor [$2,121,000] *$2,121,000,* together with not to exceed $200,000 to be derived from the highway trust fund created by section 209 of the Highway Revenue Act of 1956.

Amounts available for obligation

1958 actual appropriation	$2,121,000
Transfers to and from:	
Transfer from highway trust fund	200,000
Total funds available	2,321,000
1959 budget estimate	2,121,000
1959 transfers or authorizations estimated	200,000
Total 1959 funds estimated	2,321,000
House allowance for 1959	2,321,000

Obligations by activities

	Revised base, 1958		Budget estimate, 1959		House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Litigation	41	$314,012	41	$314,012	41	$314,012
2. Interpretations and legal advisory services	37	270,418	37	270,418	37	270,418
3. Wage determinations	42	285,278	42	285,278	42	285,278
4. Legislative advisory services	21	164,764	21	164,764	21	164,764
5. Enforcement of regulatory labor laws (regional offices)	120	904,596	120	904,596	120	904,596
6. Federal-aid highway program	29	200,000	29	200,000	29	200,000
7. Executive direction management services	29	181,932	29	181,932	29	181,932
Total direct obligations	319	2,321,000	319	2,321,000	319	2,321,000

Obligations by objects

	Revised base, 1958	Budget estimate, 1959	House allowance
Summary of personal services:			
Total number of permanent positions	319	319	319
Full-time equivalent of all other positions	None	None	None
Average number of all employees	313	312	312
Direct obligations:			
Personal services	$1,944,030	$1,939,530	$1,939,530
Travel	82,000	82,000	82,000
Transportation of things	900	900	900
Communication services	29,600	29,600	29,600
Rents and utilities services	2,250	2,250	2,250
Printing and reproduction	10,000	10,000	10,000
Other contractual services	98,720	98,720	98,720
Supplies and materials	33,200	33,200	33,200
Equipment	2,000	2,000	2,000
Grants, subsidies, and contributions	117,000	121,500	121,500
Taxes and assessments	1,300	1,300	1,300
Total	2,321,000	2,321,000	2,321,000

Summary of changes

	Positions	Amount
1958 actual appropriations	290	$2,121,000
Transfer from highway trust fund	29	200,000
Total funds available	319	2,321,000
Revised base, 1958	319	2,321,000
1959 budget estimate	290	2,121,000
1959 transfers or authorizations requested	29	200,000
Total requested for 1959	319	2,321,000

	Budget estimate, 1959		1959 House allowance	
	Positions	Amount	Positions	Amount
Increases for mandatory items:				
Retirement contribution annualization rate of 6.5 percent in 1959 and 6.25 percent in 1958		$4,500		$4,500
Annualization cost for 0 additional positions allocated for 1958				
Offsets against annualization costs: Increase in lapses		−4,500		−4,500
Net change				

PREPARED STATEMENT

Senator HILL. We will now hear from Mr. Stuart Rothman, the Solicitor of the Department of Labor. You may proceed now in your own way. Do you have a statement? Do you want to file it and then summarize? I note, however, that it is not a very long statement. You may proceed in your own way.

Mr. ROTHMAN. With your permission and to conserve your time, I will file the statement and will be brief in commenting on three general items.

Senator HILL. All right, sir. The statement will be printed in full.

(The statement referred to follows:)

STATEMENT OF STUART ROTHMAN, SOLICITOR OF LABOR

I appreciate this opportunity to discuss the budget estimates of the Office of the Solicitor for the coming year.

Our request is for $2,321,000, the same total amount received for fiscal year 1958.

Last year I described the way the Department of Labor had enforced the labor laws which protect the working people of the country. Since that time, there have been significant new developments in the program areas concerning the Solicitor's Office which I would like to tell you about.

Fiscal year 1957 marked a new high in enforcement litigation under the Fair Labor Standards and Walsh-Healey Acts. One thousand one hundred and four enforcement cases were instituted as against the previous high of 992 in fiscal year 1953. Ninety-eight percent of all civil actions and 99 percent of all criminal cases were won in the trial courts. A total of $1,020,600.74 in back wages under both acts was secured for underpaid employees.

Of the 23 appellate litigation cases which were acted on by the Supreme Court in the 3 past terms, 20 were disposed of favorably to the Government. One of the most significant decisions of the past year was the Supreme Court's interpretation of the 1949 amendments to the retail-establishments exemption in section 13 (a) (2) of the Fair Labor Standards Act. In reversing the lower court, the Supreme Court held that an employer could not qualify a group of exempt and nonexempt establishments or separate places of business for the exemption by combining them and calling them a division or organizational unit.

Another significant decision was the final termination of litigation upholding the wool and cotton textile wage determinations under the Walsh-Healey Public Contracts Act. This litigation recovered $499,649.74 in back wages for nearly 13,000 employees.

Litigation under the Federal Employees' Compensation Act against third parties who negligently caused the injury or death of Federal employees maintained a high level. During fiscal year 1957, net offsets of $1,874,972.40 were available to apply against actual or potential compensation payments.

The Department's construction labor standards enforcement program reached new levels last year; 747 enforcement cases were initiated as compared with 692 in 1956 and 404 in 1955; 35 firms and individuals were declared ineligible to receive Government contracts for serious violations of the Davis-Bacon and

related statutes. In restitution, $267,899.51 was collected for 3,149 underpaid workers as compared with $224,815.71 for 2,203 workers in 1956 and $196,396.80 for 2,225 workers in 1955. Eight-hour law penalties returned to the Government totaled $23.350.

The largest single recovery in the history of the Davis-Bacon Act was obtained last year—over $67,000.

The wage determination program under the Davis-Bacon and related acts, including the Federal-Aid Highway Act, has proceeded equally well. During fiscal year 1957, the Solicitor's Office issued 28,065 wage determinations under this program, an all-time high.

450,162 Mexican nationals were admitted to this country last year under the Mexican farm labor program and the Solicitor's Office assisted in collecting $215,845 in wages due these nationals for which the United States is potentially liable.

In addition to the activities that I have mentioned, many other important parts of the Department's law-enforcement programs—through interpretations, through litigation, through administration, and through other advisory services—fall upon the Solicitor's Office. The volume of these activities has continued at a high level.

As you can see from the budget estimates, the workload in fiscal 1959 will be at least as heavy as last year. Economy, efficiency, and hard work will be required to maintain existing high levels of performance.

We intend, in the coming year, to maintain our record of enforcing the labor laws entrusted to the Department of Labor as vigorously as possible. Our objective will be, as it has been in the past, to decide each case fairly, impartially and with efficiency so as to maintain the respect of workers and employers alike, as well as the public.

General Statement

Mr. Rothman. The amount of the budget request for fiscal year 1959 is the same as the actual appropriation for fiscal 1958.

The detailed statement shows new performance records in important areas; in the wage and hour field, in wage predeterminations and enforcement of the Davis-Bacon Act program and the Walsh-Healey program. This kind of performance is based on increased workloads, and as can be seen from the budget estimate for 1959, the workload will be at least as heavy.

Senator Hill. The House allowed the full budget estimate; did it not?

Mr. Rothman. That is correct.

Senator Hill. It is $200,000 over this year's appropriation?

ENFORCEMENT OF DAVIS-BACON PROVISIONS OF HIGHWAY ACT

Mr. Rothman. Only in this respect: Last year the Congress allowed $2,121,000 from the general fund and transferred from the highway trust fund $200,000 for the purpose of the Davis-Bacon provisions of the Highway Act. This year, the House appropriated the entire amount from the general fund and made no transfer from the trust fund.

Senator Hill. That would give you, then, exactly the same amount of money for the next fiscal year as you have for the present fiscal year?

Mr. Rothman. Yes, sir.

Senator Potter. Do I understand, Mr. Chairman, that there is no transfer of funds from the highway trust fund to enforce the provisions of the Davis-Bacon Act?

Mr. Rothman. Yes, sir; it is made from the general fund, and I believe it resolves the question that was raised last year.

Senator POTTER. I am glad to see that that is done.

Mr. ROTHMAN. I will be glad to answer any questions that you may have.

Senator HILL. Any questions?

In other words, you are asking that we take the budget estimate which is the same as the House allowed you and the same amount of money that you had for this year? Is that right?

Mr. ROTHMAN. Yes, sir.

Senator HILL. If there are no questions, then, we are certainly very much obliged to you.

BUREAU OF LABOR STANDARDS

STATEMENT OF NELSON M. BORTZ, ASSISTANT TO THE DIRECTOR, BUREAU OF LABOR STANDARDS, ACCOMPANIED BY JAMES E. DODSON, ADMINISTRATIVE ASSISTANT SECRETARY

APPROPRIATION ESTIMATE

SALARIES AND EXPENSES

[Salaries and expenses:] For expenses necessary for the promotion of industrial safety, employment stabilization, and amicable industrial relations for labor and industry; performance of safety functions of the Secretary under the Federal Employees' Compensation Act, as amended (5 U. S. C. 784 (c)); performance of the functions vested in the Secretary by title I of the Labor-Management Relations Act, 1947 (29 U. S. C. 159 (f) and (g)); and not less than [$182,575] *$201,575* for the work of the President's Committee on National Employ the Physically Handicapped Week, as authorized by the Act of July 11, 1949 (63 Stat. 409): *Provided*, That no part of the appropriation for the President's Committee shall be subject to reduction or transfer to any other department or agency under the provisions of any existing law; including purchase of reports and of material for informational exhibits and expenses of attendance of cooperating officials and consultants at conferences concerned with the work of the Bureau of Labor Standards; [$985,000] *$1,004,000*.

Amounts available for obligation

1958 actual appropriation	$985,000
Change requested for 1959	+19,000
House allowance for 1959	995,000
House change over revised base 1958	+10,000

Obligations by activities

	Revised base, 1958		Budget estimate, 1959		House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Improving State labor legislation	20	$164,044	20	$164,044	20	$164,044
2. Improving conditions of migratory workers	7	58,925	7	58,925	7	58,925
3. Reducing industrial accidents	40	386,901	40	386,901	40	386,901
4. Protecting young workers and advancing their employment opportunities	12	84,755	12	84,755	12	84,755
5. Promoting employment of physically handicapped	15	182,575	17	201,575	17	192,575
6. Registration of labor-union data	5	25,482	5	25,482	5	25,482
7. Executive direction and management services	12	82,318	12	82,318	12	82,318
Total	111	985,000	113	1,004,000	113	995,000

Obligations by objects

	Revised base 1958	Budget estimate 1959	House allowance
Summary of personal services:			
Total number permanent positions	111	113	113
Full-time equivalent of all other positions	2	2	2
Average number of all employees	111	112	112
Direct obligations:			
Personal services	$738,600	$745,200	$745,200
Travel	64,200	66,200	64,200
Transportation of things	4,100	7,100	4,100
Communication services	16,500	16,500	16,500
Printing and reproduction	61,900	64,400	61,900
Other contractual services	43,500	45,000	43,500
Supplies and materials	6,800	6,800	6,800
Equipment	4,800	5,800	5,800
Grants, subsidies, and contributions	44,100	46,500	46,500
Taxes and assessments	500	500	500
Total	985,000	1,004,000	995,000

Summary of changes

	Positions	Amount
1958 actual appropriation	111	$985,000
1959 budget estimate	113	1,004,000
Change requested for 1959	+2	+19,000

	Budget estimate, 1959		House allowance	
	Positions	Amount	Positions	Amount
Increases:				
For mandatory items:				
Retirement contribution annualization rate of 6.5 percent in 1959 and 6.25 percent in 1958		$1,900		$1,900
Offsets against annualization costs: Increase in lapses		−1,900		−1,900
Subtotal				
For program items: To accelerate program for promoting employment of physically handicapped	2	19,000	2	10,000
Subtotal	2	19,000	2	10,000
Total increases	2	19,000	2	10,000
Decreases				
Net change	+2	+19,000	+2	+10,000

EFFECT OF HOUSE ACTION

Activity 1. Improving State labor legislation

The House allowed the full amount of the request.

Activity 2. Improving conditions of migratory workers

The House allowed the full amount of the request.

Activity 3. Reducing industrial accidents

The House allowed the full amount of the request.

Activity 4. Protecting young workers and advancing their employment opportunities

The House allowed the full amount of the request.

Activity 5. Promoting employment of the physically handicapped

An increase of 2 positions and $19,000 was requested for this activity. The House allowed an increase of $10,000, which will provide for the 2 badly needed clerical employees, mandatory retirement and equipment for these positions. However, the committee still feels it needs the entire $19,000 requested to enable it to do a more realistic job next year in the varous areas indicated. If the House figure stands, the rest of the program will continue at the present level at a time when it should be growing to meet State needs.

Activity 6. Registration of labor union data

The House allowed the full amount of the request.

Activity 7. Executive direction and management services

The House allowed the full amount of the request.

PREPARED STATEMENT

Senator HILL. Mr. Nelson M. Bortz, Assistant to the Director, Bureau of Labor Standards. We are glad to have you here, sir.

Mr. BORTZ. It is a pleasure for me to be here. It is my first appearance before your committee. On behalf of the budget and program of the Bureau of Labor Standards, I have, Mr. Chairman, a prepared statement which I will be glad to leave for the record, and perhaps make a few supplemental remarks, after which, I will be glad to answer any questions which the committee may have.

Senator HILL. You go right ahead. The statement will be printed in full at this point.

(The statement referred to follows:)

STATEMENT OF NELSON M. BORTZ, ASSISTANT TO THE DIRECTOR, BUREAU OF LABOR STANDARDS

The Bureau of Labor Standards will conduct its activities in fiscal year 1959 with the same amount of funds available this current year; namely, $802,425 (exclusive of amounts appropriated for promoting employment of the physically handicapped). These activities include the promotion of occupational safety in the Nation's workplaces, technical advice to State labor departments, the job protection of younger workers, and the handling of union organization and financial reports.

Work in each of these activities will continue in fiscal 1959. Operating programs will be adapted to changing economic, legislative, and technological factors. The Bureau's safety engineers will, as requested, consult with State labor commissioners and their staffs regarding the development of safety codes and the training of safety inspectors. Aid will be provided the States on such matters as revisions of workmen's compensation, minimum wage, and child-labor laws. Technical bulletins and informational reports covering various aspects of the Bureau's work will be prepared as in preceding years.

IMPROVING STATE LABOR LEGISLATION

Sound labor legislation and efficient and equitable administration evolve from careful analysis of problems, drafting of appropriate legislation, and skilled and experienced application of the law to actual situations. In each of these important areas the Bureau offers aid to those who request it. In 1957 requests for such assistance averaged over 100 a month compared with about 85 a month in the preceding year. In fiscal 1957 47 States and Territories were given detailed, specialized aid in resolving the problems they had presented to the Bureau. About one-third of the States in 1957 set up or continued legislative commissions to study specific aspects of labor law. By 1959 their work will have reached the stage of legislative recommendations and action.

It is estimated that more than 4,000 State bills will be introduced. The progress and the outcome of these State legislative proposals will be charted and about one-half of the measures will be reviewed or summarized by the Bureau's staff as part of its responsibilities to serve as a clearing-house of information. This body of information then becomes available to all State labor commissioners, workmen's compensation boards, legislative committees, and others concerned with the progress and substance of legislative proposals in the various States.

Among the areas of undoubted future interest as evidenced by both the Association of Governmental Labor Officials and the Association of Accident Boards and Commissions is that of the application of workmen's compensation to new types of disabilities such as those stemming from the industrial use of atomic energy. More than 1,600 industrial firms, in virtually all of the States, have been licensed to use radioactive isotopoes, according to the Atomic Energy Commission. Practically all State workmen's compensation laws will require some modification if workers injured from exposure to radiation hazards are to be fully protected. Many states will be actively seeking to amend their laws in 1959. In preparation for this anticipated workload the Bureau plans to devote greater attention to such emerging problems. As one of its first steps, it will complete a comprehensive analysis of workmen's compensation laws as to coverage of workers exposed to radiation hazards and their limitations or shortcomings which now operate to bar benefits to workers sustaining radiation-hazard disabilities.

Other areas which will engage the energies of the Bureau also reflect public interest in matters affecting the Nation's wage earners. Recent developments in labor-management affairs have brought more and more requests to the Bureau for information regarding State statutes, particularly those requiring unions to register or file organizational data and those requiring a report of their financial activities with State agencies. To meet this need the Bureau is now analyzing the provisions of State laws dealing upon this subject, including regulations affecting internal union activities such as those requirng the registration of unions, submission of financial reports, and similar matters. The Bureau also plans to analyze State labor-relations acts and to issue a digest or report summarizing the different types of provisions dealing with unfair labor practices, representation elections, arbitration, and mediation and conciliation services. In still another area continuing attention will be given to States desiring to revise their minimum-wage laws and improve their administration of these statutes. In this connection a very successful conference of New England minimum-wage administrators was held under the Bureau's auspices in December 1957. Other similar regional conference will be held as the need is expressed and resources permit.

IMPROVING CONDITIONS OF MIGRATORY WORKERS

Progress in improvement of conditions for domestic migratory agricultural workers continues. The President's Committee on Migratory Labor has continued to encourage appropriate State and Federal action. Its coordination of activities of the Federal agencies has made possible joint approaches to matters in which more than one agency has an interest. The suggested standards for regulation of labor camps and safe transportation of migrants developed by the committee have been made available to the States and a number of the States have taken or are considering action in these fields. For example, Colorado in 1957 issued a code for safe transportation applying to intrastate travel; and Pennsylvania and Texas are now in the process of developing such State regulations. Pennsylvania issued revised regulations for labor camps

during the past year, and a number of other States, including Florida, Idaho, Michigan, and Texas, are now similarly engaged in formulating regulations.

Three new official State migratory labor committees were set up in 1957—Delaware, Oregon, and Texas—bringing the total to 16. The Bureau gave assistance to all of these States in getting the committees underway. Several other States are working on the appointment of such committees, and it is likely tha a least four more will be established by the end of this year.

During the past fiscal year the Bureau gave technical and advisory services to 32 States on some aspect of migratory labor. This includes assistance requested by the States in preparing the basis for the creation of a State committee, aid to the committees in getting their programs underway, and assistance on such legislative matters as regulation of labor camps, transportation, and extension of workmen's compensation to agricultural workers.

REDUCING INDUSTRIAL ACCIDENTS

The task of safeguarding American workers from injury or death is ceaseless and unremitting. Much progress has been made over the years, but much remains to be done. Moreover, as youngsters complete their schooling and enter the labor force, they must be trained in safe work habits. Older workers, returning to jobs because of need or national crises, must be alerted to potential dangers. Finally, the millions of skilled and experienced men and women in their working prime must likewise be safeguarded from hazards, whether because of carelessness or the emergence of new productive processes or machinery.

The Bureau's role in this conservation of human resources lies in the services it provides to Federal and State agencies, industries and labor unions and other organizations concerned with problems of occupational safety. These services range from the detailed and technical analysis of new types of job hazards; the drafting of suggested safety codes; the evaluation of physical facilities at Federal installations, ships and shipyards, to the conduct of safety training courses and institutes. Some of these services are made available to States and other groups as requested. Other functions are performed in accordance with Federal law or Executive order, such as the assistance rendered to the maritime industry and its employees under the Longshoremen's and Harbor Workers' Compensation Act and the safety program for Federal agency employees.

Safety engineers of the Bureau conducted 38 training courses for State safety inspectors in 1957, and 48 courses in 22 States are scheduled for this year. Technical consultations with State groups seeking to improve the quality of their inspectors and to equip them with the ability to help employers and unions institute appropriate safeguards have doubled in number, reflecting the greater emphasis in preventive rather than punitive action. In a more limited but nonetheless important area, the Bureau has undertaken more specialized activities tailored to meet the safety needs of industries such as construction, of labor organizations, and of State employees. To the maximum extent feasible these services are and will be directed to industries or groups where the hazards are relatively great.

Services extended to the maritime industry continue to be extensive, at a level of approximately 1,100 visits and consultations annually. These include surveys to assist stevedores, shipowners, and longshoremen in introducing safer methods of handling cargo and training courses for men employed around the piers. As an outgrowth of these efforts, more companies are hiring full-time safety directors to assist them in reducing the injury rates in one of the most hazardous industries. To aid in these efforts, the Bureau also prepares and publishes each year pamphlets designed to call attention to the major types of accidents that occur and how they can be avoided.

Responsibility for the stimulation of a greater safety consciousness among Federal agencies and guidance in their efforts to reduce the number and cost of injuries to civilian Government workers constitutes still another phase of the Bureau's safety program. Federal field safety councils have increased from 14 in 1952 to 94 currently. These councils are serviced through the medium of the Bureau's safety engineers, who annually conduct, on the average, 30 training courses for supervisors, foremen, and other employees charged with the development and enforcement of safe working conditions for Federal employees. Although substantial progress has been achieved by many Federal agencies, much still remains to be done. The Bureau plans to focus its efforts in those localities and among those agencies where concentrations of Federal employees are the heaviest, the types of activity most hazardous, and the current injury experience

the most unfavorable. As a step in stimulating greater safety efforts by Federal agencies the President, in 1954, established annual safety awards: one for the larger agencies (50,000 and more employees) and another for the smaller agencies, the program to be administered by the Secretary of Labor. Just recently the Department of the Navy and the Tennessee Valley Authority became the recipients for their safety record and efforts during the year 1956.

Finally, the Bureau maintains a small staff of technically trained experts who concentrate primarily upon research into hazardous occupations or processes, the formulation of safety codes or guides, and the preparation of technical bulletins and materials. On the average, more than 600 technical problems and consultations of varying degrees of complexity are handled by this group each year. Currently, the staff is intensively examining, along with other Federal agencies and private organizations, the current and long-range implications of the increasing industrial use of atomic energy. Staff members, for example, are serving on the Nuclear Standards Board and other technical and developmental committees of the American Standards Association, the principal nongovernmental organization concerned with the formulation of safety codes for the guidance of American industry.

PROTECTING YOUNG WORKERS AND ADVANCING THEIR EMPLOYMENT OPPORTUNITIES

Through its youth-employment program the Bureau seeks to eliminate child labor that is harmful, or that interferes with schooling, and thereby advance the sound employment of youth under appropriate safeguards and effective supervision. With the anticipated steady rise in the number of boys and girls reaching employment ages of 16 to 18 years the significance of a constructive, forward-looking program geared to the twin objectives of encouraging youth to acquire a maximum amount of schooling and assuring their adequate protection upon entry into the job market have taken on additional emphasis.

At the suggestion of the Bureau's Advisory Committee on Young Workers the Bureau in the summer of 1957 initiated a National Stay-In-School Campaign designed to encourage boys and girls of working age to remain in school. This program was especially directed to the approximately 40 percent of high-school students who quit school before graduation. With the aid of other Government agencies, particularly the Office of Education and the Department of Defense, and the enthusiastic support of industry, unions, trade associations and the donation of press, radio, and TV announcements the Government's pleas to stay in school got nationwide attention. In light of the current stress placed on greater educational opportunities, the Bureau plans, in consultation with its advisory committee, to continue its efforts in this area through appropriate means and channels.

However, it is also recognized that sooner or later the youth of America will be seeking productive employment. Thus some of the Bureau's activities have been and must continue to be directed to facilitating their employment in nonhazardous jobs. To increase employer and public understanding of the many jobs legally permissible for youth the Bureau has prepared a popular leaflet: "You Can Hire Teen-agers—Here's How." In cooperation with the Department's Bureau of Employment Security, the Wage and Hour and Public Contracts Divisions, and State labor departments some 40,000 of the fliers have been placed in the hands of employers, schools, and other groups since September 1957. Illustrative also of the Bureau's services in this area its staff served as technical advisers to the District of Columbia in developing a guide to the application of child-labor standards for the use of school officials, the United States Employment Service, youth counseling agencies, and employers.

In terms of its aggregate child-labor activities the Bureau last year gave services to 64 national organizations and rendered over 1,000 services to State or local organizations, agencies, and individuals.

These program activities will continue throughout 1958 and 1959 limited only by the resources available. In addition, the Bureau plans to prepare additional guides and materials stressing the importance of education and training as part of the preparation for useful, gainful employment in meeting the Nation's manpower needs. A limited survey of the employment of minors under 18 in drive-in restaurants also is planned. According to reports from a number of States the employment of youth, especially girls, in such establishments has created problems concerning which guidance is needed. As in other surveys of this sort the Bureau will study actual situations, consult with employers, youth agencies, and State child-labor experts in the development of its suggestions for con-

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structive remedial action on the part of those directly responsible for safeguarding the employment opportunities of our youth.

REGISTRATION OF LABOR-UNION DATA

Legislation for public disclosure of information regarding the organization and finances of labor unions has been urged by the Secretary of Labor and recently recommended by the President as part of a series of proposals relating to labor-management relations. The Bureau of Labor Standards has, since the adoption in 1947 of the Labor-Management Relations Act, administered those provisions of the law which require labor unions, as a condition precedent to the use of the services of the National Labor Relations Board, to file certain information with the Secretary of Labor. In recent years some 24,000 labor organizations, or about one-third of the total, have submitted reports descriptive of their organization, officers, and finances. These reports have been available to bona fide union members but not to the public generally.

GENERAL STATEMENT

Mr. BORTZ. The budget for the Bureau of Labor Standards shows no increase for the forthcoming fiscal year. There is an increase of $10,000 in the overall budget which is for the President's Committee on the Physically Handicapped, and I believe that Mr. McCahill, the executive secretary of that committee, will testify specifically on his budget.

Senator HILL. You will leave that out?

Mr. BORTZ. Yes, sir.

So insofar as the Bureau of Labor Standards is concerned, we are requesting the same amount of money as we had this present year, namely, $802,425, and our program will continue in the same vein as it has during this current year.

Emphasis is being placed on the programs and the State legislative matters of immediate interest to the States as they develop during the months.

PROGRAM AREAS

Mr. Chairman, we have five broad program areas; namely, the work which we do for the States in consulting with their State labor departments with respect to changes in State labor laws, workmen's compensation and wages, and matters of that sort; our activities which we share with the President's Committee on Migratory Labor in the field of assisting States to develop and prepare standards to assist in the migratory labor problems; our work in safety, which again is related largely to assisting the States in developing a good, sound training program for their safety people; our work dealing with the employment of youth, child labor; and then, finally, the activities which we administer in the field of union registration under sections 9 (f) and 9 (g) of the Taft-Hartley law. These are our five broad program areas.

I should be happy to answer any questions the committee would like to ask.

Senator HILL. Any questions?

Senator SMITH. No questions.

Senator HILL. Senator Ives, do you have any questions?

Senator IVES. I have no questions.

Senator HILL. Mr. McCahill.

President's Committee on Employment of Physically Handicapped

STATEMENT OF WILLIAM P. McCAHILL, EXECUTIVE SECRETARY

PREPARED STATEMENT

Senator Hill. We have a letter from Gen. Melvin J. Maas, Chairman of the President's Committee on Employment of the Physically Handicapped, advising us that unfortunately he is not able to be with us. He has been with us in the past, and he has been a mighty good friend of this committee. We are sorry that he cannot be here. We will put his statement in full in the record.

(The statement referred to follows:)

Statement of Maj. Gen. Melvin J. Maas, USMCR, Retired, Chairman of the President's Committee on Employment of the Physically Handicapped

This annual opportunity to meet with members of the Appropriations Subcommittee is always a pleasant and rewarding experience. Each year we have a brief period in which to review with you past efforts and ask your continued help for the job ahead.

As I did last year, I wish to thank you for making it possible for us to better serve the States and communities in their cooperative efforts to help the handicapped help themselves.

We held an information conference early this year for some 44 representatives of 37 governors' committees and for representatives of 5 major Federal agencies. After 10 years in this field an information course might sound somewhat unnecessary, but because of the continual turnover in State chairmen and secretaries, it was one of the most rewarding and productive things we have done recently. I mention this to show the importance of this partnership after a decade of effort which makes it possible for some 37 governors to send their personal representatives to Washington at no expense to the committee or the Federal Government.

Typical of some of the comments received was one from the full-time executive secretary of Oklahoma who said, "Thanks again for the opportunity to attend this meeting. As long as we continue to receive the wonderful cooperation that we have been receiving from the President's Committee, I know Oklahoma will continue to increase job opportunities for the disabled."

Something else that happened in January should be of significance to this committee. We held the third meeting of the Advisory Council on January 22 at the White House. At this meeting, representatives of the Departments of Labor and Health, Education, and Welfare reviewed, as did I, the recent cooperative efforts as called for under section 8, Public Law 565. Also at this meeting, ranking representatives of the Veterans' Administration, Civil Service Commission, and Department of Commerce discussed with us major programs for the handicapped to be emphasized this coming year, programs which the Federal Government can expedite through its official channels. We also took action on a number of fronts to exert or increase Federal leadership in rehabilitation and employment of the handicapped.

Two recent developments in the Federal personnel field should be of interest, namely the adoption of the President's Committee recommended policy on employment of the handicapped as the official policy of our executive branch of the Government and the institution by the Civil Service Commission of an additional duty billet in all agencies and departments and major field establishements for a coordinator responsible for expediting the employment of qualified handicapped applicants. We feel these two programs greatly strengthen the Federal position of leadership which makes it easier for us to request business and industry to increase their coooperation.

The committee has been happy to cooperate on the international scene in answer to specific requests from foreign governments, and in assisting the United States Information Agency and the Departments of State, Commerce,

and Labor, generally through the Committee for the Handicapped of the People-to-People Program of which I am also chairman. Through participation at international trade fairs and other international affairs, such as the World Veterans Federation exhibit in Berlin and the International Society for the Welfare of Cripples Congress in London, we have cooperated with both public and private groups in telling America's story abroad, a story which emphasizes our increasing concern with the dignity of the individual through making certain that we help the handicapped to help themselves. Reactions have been most favorable.

Regarding the specific item of increase before you, we are asking an additional $19,000 for the 1959 fiscal year. The bulk of this increase will provide us with two additional staff members—a secretary and an editorial clerk—in order to help us handle the increased workload in our educational and promotional program of providing leadership and materials to State and local committees. We simply have to keep up with the momentum which our efforts have caused and we have found that we need additional hands and minds to better serve the States and our own members.

The other items included in our budget increase are the normal and essential areas of travel, printing, transportation of things, and the like, to enable us to keep pace with State needs and with operating programs which seem to generate more enthusiastic support from the States and from committee member groups as they become better understood.

We are refining our regional meeting efforts this year into a pilot program in a few areas aimed at helping some States put on statewide meetings which would bring representatives in from all cooperating communities for an annual 1- or 2-day session of inspiration and information. Some States, like Pennsylvania, Maryland, and Texas, have pioneered in this effort and we feel that assistance from our office will enable more States to increase the number and quality of their local committees.

We are also encouraging the States to accept more and more responsibility for their governors' committees through modest financing of full-time executive secretaries and minimum travel and promotion budgets. We have had considerable success in this effort in a number of States during the past year and hope to have more to report next year. To this end we are preparing a second pamphlet on State committee financing and I probably will appear before a few more State legislature joint sessions in support of such proposals as well as the general proposition of increased matching funds for vocational rehabilitation. Interestingly, as soon as States obtain a full-time person they rely upon us even more heavily to supply materials and staff assistance.

The wise provision in Public Law 565 calling for increased cooperation and liaison between the committee and the operating programs in the Departments of Labor and of Health, Education, and Welfare has paid many dividends. These top representatives, together with those from Commerce, VA, and the Civil Service Commission, attend all sessions of our executive committee and report on latest developments in their operating programs. This close coordination extends daily to the staff level.

In this connection, we hope that the Congress will act favorably upon the request for the United States Employment Service and the Veterans' Employment Service in this vital field of employment opportunity for the handicapped. Without their daily efforts over and beyond the call of duty, I am afraid that cooperating State and local committees would almost have to close down. We also wish to emphasize the tremendous help that the Veterans' Administration Field Information Service has been to us in our promotional efforts, particularly in radio and television. Their cooperation has been outstanding.

We are also happy to acknowledge the top level support of the Office of Vocational Rehabilitation and its State affiliates. An example of the close coordination is the annual meeting of the President's Committee which each year takes place at a time mutually agreeable to OVR so that they can bring in all State directors and other top executives for the annual meeting of the States Council on Vocational Rehabilitation.

We have made a fast start on our second decade of service to the handicapped of our Nation. With your continued cooperative assistance and the President's consistent wholehearted support, we intend to push forward in our efforts to stimulate individuals and groups to increase their voluntary interest and cooperation.

EXCERPT FROM STATEMENT

Senator HILL. Is there anything you would like to add to the statement, sir?

Mr. MCCAHILL. No, sir; except for the benefit of Mrs. Smith and other members of the committee who do not have General Maas' letter in front of them, I might read 2 paragraphs, sir.

As you know, the House granted us an additional $10,000 over and above last year's appropriation. This amount, however, is still $9,000 short of the President's budget and of the minimum sum which we requested before the Bureau of the Budget.

In our judgment, if the House figure is to stand, we shall hire the additional two people requested and keep the rest of the program at its current level. We do not feel that at this time the program should stand still, but rather that we should move forward and keep up our momentum in our promotional efforts to convince the Nation that more than ever, it is good business to hire the handicapped.

Placements of qualified handicapped workers are down some 20 percent below last year's comparable figures. We have feared for some time that the handicapped, being the last hired in many places, might well be the first fired. We are stepping up our promotional efforts right now and would like to increase this momentum next year in the face of this situation. Hence, our hope that the extra funds will be provided.

(The complete letter follows:)

THE PRESIDENT'S COMMITTEE ON UNEMPLOYMENT
OF THE PHYSICALLY HANDICAPPED,
Washington, D. C., April 1, 1958.

Hon. LISTER HILL,
United States Senate,
Washington, D. C.

DEAR SENATOR HILL: Unfortunately, I am unable to be with you this morning. However, I have asked my assistant, Mr. William P. McCahill, to appear before you and answer any questions relative to our 1959 budget request.

As you know, the House granted us an additional $10,000 over and above last year's appropriation. This amount, however, is still $9,000 short of the President's budget and of the minimum sum which we requested before the Bureau of the Budget.

In our judgment, if the House figure is to stand, we shall hire the additional two people requested and keep the rest of the program at its current level. We do not feel that at this time the program should stand still, but rather that we should move forward and keep up our momentum in our promotional efforts to convince the Nation that more than ever, it is good business to hire the handicapped.

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It is always a pleasant experience to meet with your committee and I regret exceedingly my inability to be with you and many of my old friends this morning.

Cordially,

MELVIN J. MAAS, *Chairman.*

P. S.—I would appreciate having the attached statement placed in the record.

EFFECT OF HOUSE ACTION

Senator HILL. You might tell us if this $9,000 is disallowed as the House has done, just how that will affect you and how that $9,000 would be expended if you got it.

Mr. McCahill. The way we plan to spend it would be $2,000 extra in travel. We have a program right now which is aimed at helping the States to conduct statewide meetings.

My associate, Mr. Banta, was in Michigan last week and worked out a plan with the State of Michigan and the Governor's committee there to do this project. This means we will have to do more traveling and spend more time in the States to increase the number of community committees.

Senator Hill. In other words, to stimulate more interest and more challenge for the employment of the physically handicapped; is that right?

Mr. McCahill. Yes, sir; to increase the number of volunteers to help the employment service, OVR, and the others who have the operational responsibility in this area.

Also we would spend $2,500 in printing. That would be for additional promotional material. We have a program under way for a series of sponsored newspaper ads which would cost the Government very little in terms of its initial cost and would mean several hundred thousand dollars in the terms of free space.

I would also like to spend about $3,000 more for transportation of things which we never seem to budget enough for. We always constantly have to rob Peter to pay Paul because of the increased requests from the States.

You see, our agency is essentially a service one, and we assist the governors' committees in all of the States and Territories.

Nine thousand dollars does not sound like a lot of money, but it will help us to do a lot more for the States than we are now currently allowed.

HOUSE ALLOWANCE

Senator Hill. The House allowed the Bureau $995,000, of which $192,575 was for the President's Committee; is that correct?

Mr. McCahill. Yes; that was an increase over the current year.

Senator Hill. That was an increase of $10,000 over your appropriation for this year?

Mr. McCahill. Yes, sir.

Senator Hill. Now you are asking for an additional $9,000?

Mr. McCahill. Yes, sir.

Senator Hill. Did the House give you any specific reason for denying that $9,000?

Mr. McCahill. No, sir; we have no knowledge, but perhaps they cut it down almost in the middle.

Senator Hill. The question was not raised on the floor of the House?

Mr. McCahill. No; there was no question. It was a pleasant meeting.

Senator Ives. May I ask a question with regard to that reduction?

Senator Hill. Certainly.

Senator Ives. It should have been $9,500.

Mr. McCahill. That might have been too apparent.

COMMENDATION OF COMMITTEE

Senator Potter. I might add, Mr. Chairman, that I am quite familiar with this committee. It happened that after the war I worked for

the Department of Labor for about a year at the time this committee was first formed. Essentially their job is promotional, and the effects of this committee throughout the States and communities is so great as compared with the amount of money that is expended. It is one agency that has about the same staff now as it had when it started. Certainly all of us in our States see the effect of it, the Physically Handicapped Week and the activities to hire physically handicapped people. Mr. McCahill was with the Department at that time, and he is dedicated in this field. I know that the $9,000 could be very well spent, and I think it is appropriate.

Senator HILL. General Maas has given everything he has in this cause. I think this committee has done a very fine job.

Mr. MCCAHILL. He was just up in Massachusetts last week talking to the State legislature. He has talked to a number of them throughout the country. He has not spoken to the Maine or New York Legislature yet—they have not invited him. Everywhere he goes, he talks to the State legislature in an effort to get them to increase the amount of money that they help with.

Senator HILL. Any further questions?

You tell the General that we are sorry indeed that he could not be with us, but we are happy to have you.

There are no further questions. We thank you all very, very much.

VETERANS' REEMPLOYMENT RIGHTS

STATEMENT OF HUGH W. BRADLEY, DIRECTOR, BUREAU OF VETERANS' REEMPLOYMENT RIGHTS; ACCOMPANIED BY THOMAS Y. ENGLISH, ASSISTANT DIRECTOR

APPROPRIATION ESTIMATE

SALARIES AND EXPENSES

[Salaries and expenses:] For expenses necessary to render assistance in connection with the exercise of reemployment rights under section 8 of the Selective Training and Service Act of 1940, as amended (50 U. S. C. App. 308), the Service Extension Act of 1941, as amended (50 U. S. C. App. 351), the Army Reserve and Retired Personnel Service Law of 1940, as amended (50 U. S. C. App. 401), and section 9 of the Universal Military Training and Service Act (50 U. S. C. App. 459), and the Reserve Forces Act of 1955 (69 Stat. 598), $542,000.

Amounts available for obligation

1958 actual appropriation	$542,000
1959 budget estimate	542,000
House allowance for 1959	542,000

Obligations by activities

	Revised base, 1958		Budget estimate, 1959		House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Promotion of compliance and assistance to veterans	51	$427,650	51	$427,650	51	$427,650
2. Executive direction and management services	14	114,350	14	114,350	14	114,350
Totals	65	542,000	65	542,000	65	542,000

Obligations by objects

	Revised base, 1958	Budget estimate 1959	House allowance
Summary of personal services:			
Total number of permanent positions	65	65	65
Full time equivalent of all other positions	8	5	5
Average number of all employees	68	69	69
Direct obligations:			
Personal services	$407,700	$418,800	$418,800
Travel	59,900	59,900	59,900
Transportation of things	2,400	2,400	2,400
Communication services	15,000	14,000	14,000
Printing and reproduction	12,000	7,000	7,000
Other contractual services	9,600	7,900	7,900
Supplies and materials	3,000	2,000	2,000
Equipment	6,700	3,000	3,000
Grants, subsidies, and contributions	25,000	26,700	26,700
Taxes and assessments	700	300	300
Total	542,000	542,000	542,000

Summary of changes

	Positions	Amount
1958 actual appropriation	65	$542,000
1959 budget estimate	65	542,000

	Budget estimate 1959		House allowance	
	Positions	Amount	Positions	Amount
Increases:				
For mandatory items:				
Retirement contribution annualization rate of 6.5 percent in 1959 and 6.25 percent in 1958	--------	1,700	--------	1,700
Annualization cost for 17 additional positions allocated for 1958	--------	22,300	--------	22,300
Offsets against annualization costs:				
Personal services (WAE)	--------	−11,200	--------	−11,200
Communication services	--------	−1,000	--------	−1,000
Printing and reproduction	--------	−5,000	--------	−5,000
Other contractual services	--------	−1,700	--------	−1,700
Supplies and materials	--------	−1,000	--------	−1,000
Equipment	--------	−3,700	--------	−3,700
Taxes and assessments	--------	−400	--------	−400
Net change	--------	----------	--------	----------

General Statement

Senator Hill. Mr. Hugh W. Bradley, Director of the Bureau of Veterans' Reemployment Rights. Mr. Bradley, we are glad to have you here. Do you wish to file your statement and summarize it, or how do you wish to proceed?

Mr. Bradley. I have a statement for the record, Mr. Chairman. There are 1 or 2 things I would like to highlight. Our budget estimate for 1959 is the same as allowed for this year.

Senator Hill. $542,000 was what you had for the present year, and that is the budget estimate for this year?

Mr. Bradley. That is correct. The intake of problems and cases was greater in the past few months than we anticipated when our budget estimate was prepared last year. We have not been able to

arrest the rise in the backlog as we hoped to at that time. However, we do not expect as great a workload in fiscal 1959 as was received in recent months, and we should be able to show a gradual reduction in the backlog during 1959 and subsequent years without additional personnel.

I should also point out that inductees and 2- and 3-year enlistees now being released from the armed services are not entitled to any of the GI benefits heretofore accorded veterans, nor are they entitled to unemployment compensation for veterans. They do not meet the definition of a veteran for such purposes. The absence of these other benefits has made the reemployment program more attractive to them and has enhanced the need for speed in handling their problems.

I would like to thank you and the members of the committee for the assistance you gave us last year.

HOUSE ACTION

The House has approved the full amount of our estimate for 1959, and we are hopeful that this committee will give it favorable consideration.

Mr. English and I appreciate the opportunity to appear before you in connection with the activities of the Bureau of Veterans' Reemployment Rights, and we would be glad to answer any questions the committee may have.

Senator HILL. You feel that if the Senate concurs with the recommendations, that you can carry on the work in an effective manner?

Mr. BRADLEY. Yes; we believe that the workload received by the Bureau in 1959 will not be as large as it has been in the past few months, which has been a good deal larger than normal. In those conditions we think we would be able to handle the work in 1959.

Senator HILL. Any questions?

Senator SMITH. No.

Senator HILL. Senator Ives.

Senator IVES. No.

Senator HILL. Thank you. Your prepared statement will be printed in full at this point.

(The statement referred to follows:)

STATEMENT OF HUGH W. BRADLEY, DIRECTOR, BUREAU OF VETERANS' REEMPLOYMENT RIGHTS

The Bureau's budget estimate for 1959 is the same as the amount allowed for the current fiscal year. It permits a total paid staff of 65 positions, 51 of which are allocated to the field. For 1958, the Congress allowed additional funds to accomplish several major objectives: (1) to give more adequate geographical coverage and to improve the quality of problem and case handling as recommended by the President's Commission on Veterans' Pensions, (2) to develop and put into operation a more effective and uniform reemployment rights service at separation points and reserve centers so that all ex-servicemen and reservists could be served regardless of their distance from our field offices, as recommended by national representatives of the major veterans organizations, and (3) to keep abreast of the workload and reduce the backlog of cases and problems over the next few years.

We have reopened field offices in Columbia, S. C.; New Orleans, La.; and Indianapolis, Ind. The first 2 offices are in 2 of the larger regions as to population and area and the third is in 1 of the major industrial regions.

We have strengthened our procedures to provide more effective service to ex-servicemen and reservists at the time of reinstatement to minimize disputes and damage claims. A joint Labor-Defense Department service has been inaugurated at all reserve centers and is now in operation at a number of separation points.

It is expected that the program will be operative in most of the military establishments before the end of this fiscal year, providing increased coverage and more effective and uniform service in case and problem handling. This arrangement consists of a uniform briefing statement conducted by military personnel at the time of separation. Each separatee with preservice employment is given an opportunity to request from the Bureau specific information or assistance in determining the extent of his individual rights with his preservice employer. A simple referral card is tied to the briefing statement and may be filled out by the serviceman who wishes to avail himself of this opportunity.

We have handled to completion about 5 percent more problems during the first 8 months of this fiscal year as were handled monthly in fiscal year 1957 and the monthly average of cases closed is 22 percent greater than last year. However, due to an increase in the workload received this year over last year, we have not, as yet, been able to arrest the rise in the total backlog. Experience in the third quarter, after all of the additional field personnel had been selected and trained, has shown an increase in the production rate which we believe will enable us to handle a larger workload during the remainder of this fiscal year but we do not expect to show a reduction in the backlog by June 30, 1958.

The attached table compares the monthly average workload of the Bureau for the first 8 months of fiscal year 1958 with the monthly average for fiscal year 1957. It will be seen from this table that the monthly average of problems received in 1958 was 4,024 as compared to 3,178 in fiscal 1957, an increase of 27 percent. It will also be seen that the monthly average of cases received in 1958 was 748 as compared to 568 in 1957, an increase of 32 percent. The Bureau closed a monthly average of 3,421 problems during the first 8 months of fiscal year 1958, as compared to 3,256 in fiscal year 1957. We closed 678 cases per month in fiscal 1958 as compared to 557 in 1957, an increase of 22 percent in the more difficult and time-consuming work items.

We expect the caseload during the fourth quarter of this fiscal year to be substantially the same as in the third quarter. Under these high intake conditions, we do not expect to keep abreast of the workload received and there will be a small increase in the backlog over the next 3 months. However, we do not expect the caseload in fiscal year 1959 to be as large as in the second half of this fiscal year, which should enable us to make a gradual reduction in the backlog over the next few years without additional personnel.

The reemployment rights program offers the only readjustment benefit available to persons entering the Armed Forces after January 31, 1955. It does not involve the payment of any Government funds to ex-servicemen. The only cost to the Federal Government is that of administering it. The right to reemployment with accrued seniority and protection against the loss of benefits based thereon has become increasingly important to young men who must sacrifice time from their civilian employment to serve their country in the interest of national defense.

Workload statistics and comparison—Fiscal year 1957 and 1st 8 months of fiscal year 1958

	Fiscal year 1957		Fiscal year 1958—1st 8 months, 1958 (July 1–Feb. 28, 1958)	
	Total	Monthly average	Total	Monthly average
1. Problems and cases received	44,957	3,746	38,173	4,772
Problems received	38,137	3,178	32,192	4,024
Cases received	6,820	568	5,981	748
2. Problems and cases closed	45,754	3,813	32,796	4,099
Problems closed	39,072	3,256	27,371	3,421
Cases closed	6,682	557	5,425	678
3. Problems and cases pending at end of periods	5,739	----------	10,975	----------
Problems	2,994	----------	7,674	----------
Cases	2,745	----------	3,301	----------

Bureau of Apprenticeship and Training

STATEMENTS OF W. C. CHRISTENSEN, DIRECTOR, BUREAU OF APPRENTICESHIP AND TRAINING, AND NEWELL BROWN, ASSISTANT SECRETARY, DEPARTMENT OF LABOR

APPROPRIATION ESTIMATE

Salaries and Expenses

[Salaries and expenses:] For expenses necessary to enable the Secretary to conduct a program of encouraging apprentice training, as authorized by the Acts of March 4, 1913 (5 U. S. C. 611), and August 16, 1937 (29 U. S. C. 50), [$3,600,000] *$3,900,000.*

EXPLANATION OF CHANGE IN BUREAU TITLE

The Bureau's title was changed by general order of the Secretary No. 91 on December 11, 1956, in order that it would be more descriptive of the total Bureau's function and activity. The change is also in accord with the legislative citations contained in the appropriation language of 1958. The act of August 16, 1937, authorizes the promotion of apprenticeship. The act of March 4, 1913, is the basic legislation of the Department used as the authority to promote training in other than apprenticeable occupations since, in the Department's mandate to advance the employment opportunities of all workers for profitable employment, programs must be developed in all phases of occupational training.

Amounts available for obligation

1958 actual appropriation	$3,600,000
1959 budget estimate	3,900,000
Change requested for 1959	+300,000
House allowance for 1959	3,600,000

Obligations by activities

	Revised base, 1958		Budget estimate, 1959		House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Training promotion and service to industry	428	$3,129,700	452	$3,372,375	428	$3,134,475
2. Training research and technical services	37	261,400	43	309,360	37	261,810
3. Executive direction and management	26	208,900	28	218,265	25	203,715
Total	491	3,600,000	523	3,900,000	490	3,600,000

Obligations by objects

	Revised base, 1958	Budget estimate, 1959	House allowance
Summary of personal services:			
Total number permanent positions	491	523	490
Full-time equivalent of all other positions	None	None	None
Average number of all employees	484	516	483
Direct obligations:			
Personal services	$2,907,200	$3,076,050	$2,902,025
Travel	318,000	340,700	318,000
Transportation of things	9,000	12,450	9,000
Communication services	66,500	71,250	66,500
Rents and utility services	1,102	9,502	1,102
Printing and reproduction	20,700	46,000	20,700
Other contractual services	82,550	124,900	82,550
Supplies and materials	9,600	10,150	9,600
Equipment	7,400	17,900	7,400
Grants, subsidies, and contributions	176,000	187,925	181,175
Taxes and assessments	1,948	3,173	1,948
Total	3,600,000	3,900,000	3,600,000

Salaries and expenses, Bureau of Apprenticeship and Training—Summary of changes

	Positions	Amount
1958 actual appropriation	491	$3,600,000
1959 budget estimate	523	3,900,000
Change requested for 1959	+32	+300,000

	Budget estimate, 1959		House allowance	
	Positions	Amount	Positions	Amount
Increases:				
For mandatory items:				
Retirement contribution annualization rate of 6.5 percent in 1959 and 6.25 percent in 1958		$5,500		$5,500
Offsets against annualization costs:				
Personal services −1 −$5,440				
Lapse +265				
Net personal services			−1	−5,175
Grants, subsidies and contributions				−325
Subtotal		5,500	−1	None
For program items:				
Skill development in selected industries and communities	32	$294,500	None	None
Subtotal	32	294,500	None	None
Total increases	32	300,000	None	None
Decreases	None	None	None	None
Net change	+32	+300,000	−1	None

EFFECT OF HOUSE ACTION

Activity 1. Training promotion and service to industry

An increase of $237,900 for 24 positions (12 GS–12 apprenticeship representatives and 12 GS–4 clerk-stenographers) was denied. This increase was requested to permit accelerated promotional activity and technical assistance by Bureau staff in industries and communities in which specific demands for increased skills are identified. Plans for 1959 call for promotional and consultative services to be provided to an additional 3,000 industrial establishments; 500 local unions; 200 local chapters of trade associations; and 200 union-management committees. The House action will preclude this increase of activity in industries and communities having identified needs for skills.

A request of $4,775 for mandatory retirement costs was also denied.

Activity 2. Training research and technical services

An increase of $47,550 for 6 positions was denied. This increase was proposed to provide needed support of field activities in the areas of research, development of technical material, and preparation of publications. This denial will affect not only the increased program activity proposed for 1959, but will continue an existing deficiency in these areas which has limited the effectiveness of field activities.

A request of $410 for mandatory retirement costs was also denied.

Activity 3. Executive direction and management

A proposed increase of $9,050 for 2 clerical positions to handle increased workload of coordinating and administrative work was denied, affecting current program as well as proposed increased activity.

An increase of $315 for mandatory retirement costs was denied. To provide for this as well as the $410 for activity 2 and $4,775 for activity 1, 1 current GS-9 position will be eliminated in the Office of the Director for a total reduction of $5,500. This will curtail staff services in this office and eliminate a position which has provided an opportunity for inservice training of replacement staff.

PREPARED STATEMENT

Senator HILL. Mr. Christensen from the Bureau of Apprenticeship and Training, we will be happy to have you proceed in your own way, sir. Do you want to file your statement in full?

Mr. CHRISTENSEN. Yes. We filed our statement with the members of the committee, and if you do not think it is necessary, we will not read the statement at this point.

Senator HILL. Your prepared statement will be printed in full in the record of the hearings at this point.

(The statement referred to follows:)

DIRECTOR'S STATEMENT FOR THE BUREAU OF APPRENTICESHIP AND TRAINING REQUEST FOR FISCAL YEAR 1959

The estimate of needs for the Bureau of Apprenticeship and Training for fiscal year 1959 is $3,900,000, representing an increase of $300,000 over the current year's appropriation. The activities of the Bureau have been affected by the continuing heavy requirement for military equipment: the growth in population, with its resulting increase in demand for goods and services, and the increasing development of mechanization in industrial processes.

The advance of mechanization with the consequent introduction of new processes and machinery brings with it new skill requirements: Increasing the total number of skilled workers, and improving and widening skills of those already employed. These requirements will be especially noted in the missile, space-device, aircraft, and allied industries, whose problems will be concerning Congress and the American people for some time to come.

The mission of the Bureau of Apprenticeship and Training in connection with the problems of inadequate skilled manpower supply is to persuade management and labor to increase training for skilled workers and improve the quality of training. It will do no actual training; its responsibility is to promote training and to provide technical trainnig services.

The major effort of the Bureau will continue to be in apprenticeship, which is the basic method for training craftsmen. Promotion of other types of training is also necessary, however, since an industry or plant requesting assistance usually wishes to approach its training problems as a whole.

GROUP APPROACHES

Although some of the larger corporations have developed excellent training programs, many smaller companies need help. Most of them lack the resources and staff required to plan adequate training programs. This is especially significant when we consider the fact that over 98 percent of business enterprises of this country are small firms employing fewer than 100 workers. We work with such small employers to stimulate their interest in training and to assist them in setting up their own training programs.

Many firms are too small to operate their own training programs. We assist such employers by helping them organize group programs, in which several establishments participate. These areawide apprenticeship committees make it possible for employers to do on a group basis what they may be unable to do on an individual basis. Where these committees are joint they usually consist of 3 representatives from employers and 3 from labor. They advise on selection of apprentices, assignment, movement from job to job when the volume of work changes, and determination as to when they have completed their apprenticeships. Approximately 5,000 areawide committees are sponsoring apprenticeship programs throughout the United States.

The Bureau has had outstanding success in promoting local training on a group basis. We are also using the same approach in working with national groups. For example, there are 20 national joint apprenticeship committees which are performing outstandingly in improving the kind of training being carried on in their industries. They have been successful, too, in increasing participation of their members in local apprenticeship programs. Since each local committee is composed usually of 6 members this means that approximately 30,000 persons are giving services in the apprenticeship effort without cost to the Government. An increasing number of these committees have raised their own funds to employ full-time staffs to assist in the administration of their training programs.

National industry promotion.—Three years ago the Division of National Industry Promotion was established to step up interest at the level of national associations and international unions. We are able to report that in 1957 we worked with 193 national associations, and with 75 international unions—increases over the previous year of 121 and 23, respectively. Tangible results from this activity, while not immediately measurable, can be expected at the local level as the national influence becomes effective.

COORDINATION WITH OTHER GOVERNMENT TRAINING AGENCIES

Vocational education.—The programs of Vocational Education and the Bureau of Apprenticeship and Training are both indispensable. Wherever an apprenticeship program is established there is a related instruction requirement. Wherever the Bureau representatives recommend other types of training other than apprenticeship the vocational educators are asked to participate.

In order to make certain of close understanding and working relationships, we have emphasized that the Bureau has no intention of carrying on actual training. The Secretary of Labor has stated formally that the Bureau is limited to promotion of apprenticeship and other forms of training. Furthermore, that it does not and could not attempt actual training.

The Bureau has taken the initiative in discussing these matters with vocational leaders a number of times since our appearance here last year. We feel that substantial progress has been made in establishing mutually satisfactory relationships.

Other agencies.—The Bureau has continued to work closely with the training divisions of the Armed Forces, with apprenticeship divisions of the State departments of labor, and with Training divisions of civilian departments of the Federal Government.

PROGRAM PLANS FOR 1959

Examination of our workload relative to results achieved has indicated the importance of continuing work with industries in which significant progress is being made. A prime example of this is the construction industry. Much of our resources will thus be required for development in such major industries. In addition we must meet the challenge of urgent demand for training in certain selected industries, which we plan to give special emphasis.

Industries which will be given this special emphasis will be chosen on the basis of factors such as changing technology, growth, and their critical relationship in the national economy or national defense. The industries decided upon at this time are: Aircraft and missiles; electrical contracting; electronic equipment; tool and die; and pulp and paper.

In connection with the five industries mentioned the following steps are being taken: Objectives have been set for the fiscal year; a quota of field calls has been allocated for each industry; and reports and statistics are to be carefully scrutinized, so that results can be measured against stated goals.

In view of the great number of industries needing training services, their complexity and variety, the differences in their training needs and in their

training capabilities and facilities, systematic research is needed to lay the groundwork for promoting additional training. This kind of planning activity pays dividends in helping to determine where we are to concentrate our resources; and to determine which methods and techniques are more effective in terms of practical results.

Our plans to emphasize promotional work in selected industries will be tied in closely with the national industry promotion program. Actions taken by national trade associations and international unions, it has been demonstrated, greatly facilitate the work of field representatives at the local level.

Community skill development.—We are also improving our techniques for promoting apprenticeship and other types of training on a community basis, especially in communities where shortages of skilled workers have developed owing to industrial expansion; and in the so-called distressed areas. Wherever community manpower studies are sponsored by the Bureau of Employment Security, Bureau representatives participate and render such assistance as their experience permits. The specific action role of the Bureau is to follow through on the training aspects of the study. This is accomplished by providing stimulation and assistance in meeting the training needs revealed by the study. We work with employer and employee organizations, local schools, and other community organizations to determine the extent to which additional apprenticeship and training need to be developed in industry. We then assist them in developing training programs.

It has been our experience in conducting such projects that employers and labor organizations frequently need informational materials on the technical aspects of training. To meet this need, we are experimenting with the development of training materials centers. As a result of cooperation between the Department of Defense and the Bureau, Defense has made available from its vast store of training information multiple copies of its materials. These materials consist of sample programs, instructor's guides and related instruction material. With these as a base, it is planned to set up training materials centers in which this and other such information will be available to industry. To them will be added materials from private companies, from unions, and from schools.

The first training materials center was opened in Phoenix in January 1958 for use of the State of Arizona. Ten additional such centers are planned for coming months.

Of the $3,900,000 request to meet demands for its services in fiscal year 1959, over 79 percent of the $300,000 increase—$237,900—would be expended in the field; $131,000 for 24 new positions and $106,900 for related nonlabor costs. About 19 percent—$56,600—would strengthen departmental functions in support of field activities. This sum would provide for 8 new positions costing $37,850 and nonlabor costs of $18,750. In line with increased emphasis on public informational aspects of our program, field and departmental nonlabor costs include $35,000 for promotional film and radio and television scripts. The balance of the increase—$5,500—will cover annualization of retirement costs.

RESTORATION REQUESTED

Senator HILL. You are asking for restoration of $300,000.

Mr. CHRISTENSEN. Yes, sir.

Senator HILL. Suppose you direct yourself to that.

Mr. CHRISTENSEN. The House committee did not see fit to allow the increase of $300,000, which was earmarked, primarily, for the training service activities. We believe that this is a sound program that we have presented. We think that this increase that we have requested is very important in terms of the three-point program that we have proposed, which briefly stated are these: The industry projects in which we would work with management and labor or groups in major industries that have shown an interest in doing more on apprenticeship and training; with the community approach of following through on the manpower studies to provide promotion and training service in the communities based on the needs of the com-

munities; and to do these two jobs to substantially improve our promotional materials and aids which will accomplish this.

METHOD OF OPERATION

I would like to take a minute to point out how we work in our Bureau. We do not actually perform any education or training activities per se. We do not conduct training programs.

Senator HILL. You leave that entirely now to the vocational education?

Mr. CHRISTENSEN. Yes. In fact, over the years with the hundreds of thousands of apprentices that have been trained, this Bureau has never actually trained an apprentice. Our job is strictly a promotional service job. The training on the job is by the employer. The related instruction is done in the schools, largely the vocational and the trade schools.

Whenever a question about what we mean by this training service is brought up, we attempt to point out that our policy is that we do not conduct training. We are not in conflict with any other agencies of the local, State, or Federal Government. We promote the need for training through various kinds of promotional devices: Charts, films, scripts, publications, and the like which we think help to point up the need for training.

Then our field staff will go in and assist employers and unions in helping them to determine what their specific training needs are.

Then encouraging management and labor to establish some kind of a formalized training policy that they would follow in carrying out whatever training they choose to use is next.

Next, to assist management and labor in the organization of training and to meet the needs that they have determined they should do something about. In some cases, this may go so far as to help counsel them in the selection of personnel that they would use for training on the job, training directors, training staff, and the like.

Finally, and probably most important of all, to point out what available services and facilities there are available to management and labor to carry out these programs. Here our emphasis, of course, is on vocational education.

RELATIONSHIP TO VOCATIONAL EDUCATION

Last year, and again this year, there have been some questions raised as to our relationships with the vocational education people. I think last year the main problem was one of semantics, one of the misinterpretation of language, because our policy was then, as it is now, that we do not conduct training; we are not in conflict in any way with the school system.

In this connection, during the past year we have made a tremendous number of efforts with all segments of the educational system concerned with this program. We have been assured by the officials of the Office of Education and by the officials of the American Vocational Association that they have no feeling of conflict or any disagreement with what we are attempting to do. In fact, both of the representatives from the Office of Education and the AVA have indicated that they thoroughly understand what we are trying to do; they are in general agreement with it, and they are in favor of supporting the program that we have asked for in this appropriation.

So, in short, we sincerely hope that with this presentation of these facts and with other information that may be available from any one of many sources, that the committee will see fit to allow the full appropriation requested, because we believe that it is a sound program and really contributes to a job that needs to be done.

Senator HILL. It is certainly your opinion that disagreements or any considered disagreements of the past have been resolved now and everybody is in accord?

Mr. CHRISTENSEN. Yes, sir. In fact, last year Members of Congress entered in the Congressional Record a number of letters they received. Many of these happened to come from the State of Wisconsin. There may have been some others. We read those carefully, and we worked in those areas where there seemed to be disagreement or misunderstanding. As a matter of fact, entered in the Congressional Record of recent date, was a letter from the State vocational director of Wisconsin, who has indicated he has completely reversed the feeling he had last year. He has checked with the people in his State. I think the same thing is true in the few other States where there seemed to be a problem.

We worked on this job at the local level and at the State level and at the national level. In fact, in talking with the officials of the Office of Education and the American Vocational Association recently, I learned from both of them that to their knowledge as well as to ours, there have been no letters of question or disagreement as to any opposition to this program or the requests that we have made.

In fact, we have heard that there have been a number of communications to Members of Congress in favor of the program. I think the fact that this year no one seems to know of any opposition or any formal protests of any kind indicates what I have mentioned earlier, that we have really worked at this job. I think, originally, it was a matter of semantics; that now the air is pretty clear.

LETTER FROM DR. MOBLEY

Senator HILL. The Secretary, I think, spoke of a letter from Dr. Mobley, who is the executive secretary and director of the American Vocational Association. Are you familiar with that letter that the Secretary referred to?

Mr. CHRISTENSEN. I believe that he was talking about newsletters that Dr. Mobley has issued to the members of AVA or to the various committees. In fact, I am familiar with the work of one committee in particular that is tied in closely with this, the planning and policy committee for trade and industry, AVA. In fact, Under Secretary O'Connell and Assistant Secretary Brown and myself met with this committee when they were here in Washington in January. We had a very good meeting there. Dr. Mobley told me later when he met with the men in his office that they were highly pleased with the meeting, and they felt that any misunderstanding that did occur before, has now been cleared up.

Senator HILL. If you have any letter or any communication from Dr. Mobley, we would be very happy to have that for the record.

Mr. CHRISTENSEN. I think we can find one or more such communications, because during the past year we have had a number of exchanges between Dr. Mobley and the Under Secretary and myself and have

attended a number of meetings with them. In fact, I might add, that last year at the AVA convention in Philadelphia in August, Dr. Mobley invited me to address the executive committee of the AVA to point out what the Department and the Bureau were doing, and they seemed quite satisfied with what we were doing was in agreement with them. He has invited me to come back in August when the executive committee meets in Buffalo, and I have agreed to do this.

Senator HILL. If you should have any communication from Dr. Mobley that might throw any light on this, we would be very happy to have a copy of it.

(The communications referred to follow:)

AMERICAN VOCATIONAL ASSOCIATION, INC.,
OFFICE OF THE EXECUTIVE SECRETARY,
Washington, D. C., February 12, 1958.

Mr. JAMES T. O'CONNELL,
Under Secretary of Labor,
Department of Labor, Washington, D. C.

DEAR MR. O'CONNELL: Thank you so very much for your good letter under date of January 31.

It was indeed a pleasure to have you and your associates to meet with the policy and planning committee of the trade and industrial division of the AVA, at the Press Club on January 28, to discuss ways and means of strengthening relationships between employees of the United States Department of Labor and vocational educators at local, State, and national levels.

The vocational eductors in attendance at this luncheon were impressed with your sincerity and that of your coworkers. It is the belief of the vocational educators who attended the luncheon that the proposed joint committee could do much to effect a better understanding of the work each group is doing and should do.

Following the luncheon, the policy and planning committee representing the trade and industrial division of the AVA agreed unanimously to recommend to the AVA executive committee that a committee of vocational educators composed of the vice president of the trade and industrial division of the AVA, the immediate past vice president and two additional members be appointed to serve as a part of the joint committee representing vocational educators and the Department of Labor. They also recommended that the Director of the Trade and Industrial Branch of the Office of Education and the AVA executive secretary serve as consultants to the committee.

Their recommendations will be presented to the AVA executive committee at its spring meeting, which is to be held in Buffalo, N. Y., April 9–12 of this year. We feel confident that the executive committee will act favorably upon this recommendation and will provide a budget to cover travel expenses of the AVA members who will serve on the joint committee. Just as soon as formal action is taken on this matter we will let you know who the AVA members of the joint committee will be.

Again may I state that we were glad to have opportunity to talk to you and your associates. I believe that we are pursuing a course that will result in improving the skill of our Nation's work force.

With best wishes, I am,

Sincerely yours,

M. D. MOBLEY, *Executive Secretary.*

UNITED STATES DEPARTMENT OF LABOR,
OFFICE OF THE SECRETARY,
January 31, 1958.

Dr. M. D. MOBLEY,
Executive Secretary, American Vocational Association,
Washington, D. C.

DEAR DR. MOBLEY: Thank you for inviting me and my associates to the January 28 AVA luncheon meeting at the Press Club. Assistant Secretary Brown, Bureau Director Christensen and I were glad to meet the members of the policy and planning committee of the trade and industrial education division of the association. We were pleased to have the opportunity to discuss working

relationships between the Department of Labor and vocational educators at local, State, and national levels.

It seemed to me that this was a constructive discussion. I feel it clearly indicated the close relationship of our respective programs and the extent to which, working together, we can further each others efforts in achieving our common goal of developing a skilled and versatile work force. There appeared to be general agreement that it would be advantageous for representatives of the association, the Labor Department and the Vocational Division of the Office of Education to periodically meet informally and follow through our discussion. I would like to confirm our interest in such an arrangement.

If this idea is agreeable to you and your associates, would you let me know the individuals whom you would like to have meet with us? I will name a similar group from the Department of Labor and will make contact with the Vocational Division. I believe that the group should be of modest size, perhaps 3 or 4 representatives each, and might meet quarterly. We feel that this arrangement will do much to assist all of us in furthering our mutual aims.

Sincerely yours,

JAMES T. O'CONNELL,
Under Secretary of Labor.

Senator HILL. Senator Smith.

Senator SMITH. No questions.

Senator HILL. Senator Ives.

Senator IVES. No questions.

Senator HILL. Senator Potter.

NEED FOR SKILLED WORKERS

Senator POTTER. I have one question. I do not know whether this relates to your apprenticeship training program or not. What is happening today is that a lot of our tool and die people tell me that they are having difficulty in getting skilled workers and that the apprenticeship program actually just about replaces those retiring or who die, and it is difficult to meet an expanding program with the present apprenticeship program. I do not know whether that is a local problem within our States or whether it is a national problem. If it is, has it been brought to your attention, and if so, do you have any comment?

Mr. CHRISTENSEN. This is one of the most important aims or objectives that we have, to encourage management and labor to anticipate the needs of not only today, but of next year and 5 and 10 years from now. I think this is true, what you say about tool and die makers. It is true of many trades, that the people in training do not really do much more than take care of the replacement need for retirements, deaths, and the like; and that much more should be done in the field of preparing for the future with more people in training.

However, as a promotional and a nonregulatory agency, we cannot dictate, we cannot actually provide employment. Our job is to sell management and labor on the need for this.

Senator POTTER. I assume probably this would come more in the field of vocational education, but it seems to me as automation becomes more and more advanced, we are going to run into a situation where the demand for unskilled workers will become less and the demand for skilled workers more. I am fearful that our national program is such that we are not meeting that particular need today. I do not know what the answer should be. I do not know whether we should have more technical schools.

For example, your large companies have certain technical schools for training primarily skilled workers for their own particular com-

pany; however, a small company, for example, cannot afford to have their own training schools. Therefore, they have to go on the outside market and there is not the skilled personnel available.

I think probably it is a matter of something that we should consider in our total educational program rather than your program here. I do think it is a real problem we have when we are talking about meeting particular needs today. Unless we are ready to provide training or skills, we are going to find that there is a vacuum in which to operate.

Mr. CHRISTENSEN. This is true. In this connection, I think there is much that can be done for the acquiring of skills in the schools, but this has to be supplemented by on-the-job experience. Much can be done to expand existing skills of experienced workers and journeymen, and much of this is done on the educational setup.

Senator POTTER. I am fearful of what is going to happen. We are going to have a great importation of tools, as just one example, from other countries, because we are not able to meet our needs here.

EMPHASIS ON TOOL AND DIE INDUSTRY

Mr. CHRISTENSEN. You mentioned the tool and die industry particularly. This is 1 of the 5 industry projects that we have proposed for emphasis in 1959. Over the last few years we have done a great deal of work with the industry and with the National Tool & Die Manufacturers Association, which is made up of small employers. We helped set up the national apprenticeship standards for the tool and die industry. We have been active with them right along, and they are one of the groups that have come to the point where a broad-gaged promotional program on a national basis is in tune with the times and everybody is ready.

In connection with the small employers, this is one of the principal activities of our staff. When a small plant does not have the facilities or the wherewithal to conduct its on-the-job program and has to depend solely on the schools, a number of fine programs have been worked out where 2, 3, 4, 5, or 6 employers would go together and, with our man doing some coordinating between the employers and the schools and the unions where they are involved, set up a cooperative arrangement where they can get their classroom study in a vocational school as a group. This makes it economically feasible for the school. Then, whatever on-the-job training they can perform, they do with their organization.

Senator POTTER. Is it a normal procedure when your skilled employees negotiate the contract with management to have a clause within that contract which sets the number of apprenticeships that they will have?

Mr. CHRISTENSEN. In a majority of cases, yes. They set up a ratio of how many apprentices should be in training in relation to the number of experienced or journeymen workers. Is that what you mean?

Senator POTTER. Yes.

Mr. CHRISTENSEN. I would say that in the majority of contracts affecting apprenticeship, the matter of ratio is covered.

PRESENT TRENDS

Senator POTTER. What has been the trend? Is the trend today to restrict the number of apprenticeships as compared with the number of journeymen or is it to liberalize it?

Mr. CHRISTENSEN. I think years ago the trend was to restrict, but in the last 5 years practically all of these factors that are bargained, have increased the number of apprentices in relation to the journeymen in most of the skilled trades.

Senator HILL. Secretary Brown, is there anything you would like to add?

Mr. BROWN. I have just one comment going back to what Mr. O'Connell said. The facts about skills and training are manifested now in the shortage in terms of security. The lethargy of employers is also manifested. Also the interest of those who hear about it. It seems to me it would be a sad thing if this echo of misunderstanding in the past as between the AVA and the Bureau were allowed to inhibit a growingly effective program in this area.

Senator POTTER. You think it has been resolved?

Mr. BROWN. I think it has been resolved definitely.

Senator HILL. Any other questions, Senator?

Senator POTTER. No.

Senator HILL. We want to thank you very much.

The committee will now stand in recess until 2 o'clock this afternoon.

(Thereupon, at 12:05 p. m., the subcommittee recessed, to reconvene at 2 p. m., same day.)

AFTERNOON SESSION (2 P. M.)

AFTERNOON SESSION (2 P. M., TUESDAY, APRIL 1, 1958)

BUREAU OF EMPLOYMENT SECURITY

STATEMENT OF ROBERT C. GOODWIN, DIRECTOR; ACCOMPANIED BY E. L. KEENAN, DEPUTY DIRECTOR; NEWELL BROWN, ASSISTANT SECRETARY; R. G. WAGENET, ASSISTANT DIRECTOR FOR UNEMPLOYMENT INSURANCE; AND JAMES E. DODSON, ADMINISTRATIVE ASSISTANT SECRETARY, BUREAU OF EMPLOYMENT SECURITY, DEPARTMENT OF LABOR

PREPARED STATEMENT

Senator HILL. The committee will kindly come to order.

We are very happy to have with us Mr. Robert C. Goodwin, Director of the Bureau of Employment Security.

At the outset we will place in the record your prepared statement in comment upon the several appropriation items within your bureau.

(The statement referred to follows:)

Mr. Chairman, since our 1959 appropriation requests were prepared, economic conditions have changed significantly with direct and important effects upon nearly every activity of the Federal-State employment-security system.

In the late fall of 1957, when our budget requests were being developed, there were indications that soft spots were beginning to appear in a number of important segments of the economy. Our own data showed that insured unemployment began to rise as early as last September, although there is usually a decline in that month. The volume continued to rise more sharply than usual right up to the time we submitted these budget requests. At that time, however, it was not

clear whether the economy was about to enter a recession period or whether the downturn in economic activity might turn out to be a very minor and short-term adjustment.

As the members of the committee know, there has been no clear-cut evidence of recovery in the economy so far this year. Instead, further declines have occurred in some sectors and insured unemployment has risen above earlier expectations. As a result, we are now certain that the funds requested in the budgets before you will not pay for the workloads which are likely to be experienced by the Federal-State employment-security system in fiscal year 1959.

While we know that it will be necessary to submit supplemental budget requests, we are not yet in a position to indicate what our additional workload will be nor how much more funds will be needed in fiscal year 1959. The reason we cannot forecast accurately at this time how much more money will be needed is that our workload will depend upon economic developments not only during fiscal year 1959 but also during the rest of this fiscal year. The volume of our workloads will depend both on how fast the economy recovers and on how large a backlog of unemployment is built up before the recovery begins. We cannot estimate either of these factors yet because, on a seasonally adjusted basis, industrial production, personal income, consumer spending, and nonagricultural employment are still declining and unemployment is still increasing.

I would like to make some specific comments with regard to the "Salaries and expenses," "Grants to States," and the "Mexican farm labor program" needs for 1959 and submit for the record previously prepared statements on each if it is agreeable to the committee. Since the House has approved the full amount of the request for "Unemployment compensation for veterans and Federal employees," I will just enter for the record the statements which were previously prepared for those appropriations. We are preparing and later will submit supplemental requests for appropriations for those two programs.

SALARIES AND EXPENSES, BUREAU OF EMPLOYMENT SECURITY

For "Salaries and expenses" we requested $6,300,000, an increase of $342,000 over the $5,958,000 available for 1958. The House approved $6,219,000, an increase of 37 positions and $261,000 over 1958 and a decrease of $81,000 from the request.

Concurrent with the rise in unemployment there has been a very large increase in the work of the Bureau. The number of requests for local labor market information from Members of Congress, the executive departments and State and local governments and public organizations has been so large that we have not been able to do high priority work of almost equal importance. Similarly, we have not had the staff necessary for working with the State employment security agencies to adjust their operations to process the greatly increased workloads in the most effective manner. The amount of work required to prepare and evaluate new legislative proposals has also required much overtime and the diversion of staff from other essential work.

Since unemployment is expected to continue to be relatively high in 1959, we must have more staff in the Bureau. When we are able to assess the 1959 situation more clearly, we will request the staff to meet the increased demands for service made upon the Bureau. Therefore, we are not appealing the reduction of $81,000 made by the House, at this time. It is clear, however, that we will need all the money approved by the House in addition to the supplemental funds to be requested.

GRANTS TO STATES FOR UNEMPLOYMENT COMPENSATION AND EMPLOYMENT SERVICE ADMINISTRATION

For grants to the States for administration of their unemployment compensation and employment service programs, we have requested $329,300,000 for 1959. This was an increase of $36,486,000 over the $292,814,000 appropriated for 1958. Of the $36,486,000 increase, $10 million was to provide for a contingency fund in 1959.

The House reduced the request by $24,300,000. We are requesting restoration of $11,800,000 of the House reduction to enable the States (1) to continue the improvement in operating effectiveness being attained in the latter part of 1958, to make other important changes which will permit them to give needed services to the public and which will help to prevent overpayments caused by error or fraud, (2) to provide for nonpersonal service costs at a level consistent with needs

and (3) allow the Bureau to meet State requests for funds needed to plan for operating under emergency conditions.

In its report, the House Appropriations Committee noted that some savings in unit costs are possible as the volume of claims increases. We, too, have been concerned about the impact of increases in workloads. However, our concern has been not only with regard to possible savings, it has also been with regard to the kind of operations which are being carried out by the States at the present time and whether the program is being run in an effective and efficient manner to guard against improper payments. In the last month we have consulted with three groups representing the State employment security agencies. Also, we have sent Bureau employees to survey operations in the State and local offices.

After reviewing the findings of the surveys and meetings, we have come to the conclusion that the State employment security agencies could absorb about $12,500,000 of the House cut. They will, however, need restoration of $7,727,000 to achieve more effective operations in 1959.

The report of a March 19 and 20 meeting with the State agency representatives indicates the areas where savings can be made when workloads are high and where improvements are needed. Since these considerations influence our request for restoration of amounts cut out by the House as well as any supplemental request which we would submit, I would like to quote a substantial part of the report.

"A. Functions affected in 1958 and recommendations for 1959:

"1. Initial claims time is probably lower than budgeted because a smaller number of benefit rights interviews are being given. In addition there probably has been a speedup and corner cutting. In 1959 more benefit rights interviews should be given although probably less in proportion to new claims than in 1957, for example. Also, as more space and people become available it will be possible to give more benefit rights interviews. There will be some absorption in 1959.

"2. Continued claims time is lower than budgeted for 1958. Fewer periodic reinterviews are being given in relation to the number of continued claims. There has also been a speedup in operations and the States have been hampered by lack of space, manpower, and skill of available employees. For 1959, especially after the labor market improves in the latter part of the year and space and personnel problems are resolved, more periodic reinterviews should be given. Some reductions in unit time will still be possible even though efforts are made to improve the quality of continued claims interviews to minimize overpayment and fraud problems and maintain the integrity of the program.

"3. Any statement on absorption should point out our experience in overpayment and fraud in periods of economic downturn. Since discovery of such errors usually lags by at least 1 year and is measured against the insured unemployment of the period following the downturn, the rate of overpayment and fraud will probably not show any increase in percentage at this time. However, we need to make every effort now in processing the high claims workloads to prevent errors.

"4. A large number of skimpy new applications are being taken which have no value for placement and therefore less time is being used than was budgeted. For 1959, where applications are being taken to meet the requirements of State laws with regard to registration for work but where in fact the individual will be recalled either by the employer or through his union, there is no necessity to provide more time for application taking. However, some of the skimpy applications are being taken because of the pressure of large numbers of workers in the office, space restrictions and lack of personnel. These applications should be usable for placement and time should be provided in 1959. In total, less time needs to be provided in 1959 for application taking than is provided under the standard time factor.

"5. The time budgeted for nonmonetary determinations is not being fully used in 1958 because there are fewer separation issues. In 1959 the ratio of separation issues will probably continue to be less than in 1957, however, the issues which do arise are likely to be more time consuming. In the aggregate some savings can be made in 1959 in the nonmonetary determinations time.

"6. While appeals time was higher than budgeted in the July-December 1957 period, it was expected that with higher unemployment there would be a decline in the unit cost as well as some reduction in workload. This situation will probably continue in 1959 and therefore there should be some absorption because of an estimated lower time factor.

"7. There appears to be some savings in benefit-payment time in 1958 a part of which should continue into 1959.

"B. Additional budgetary considerations for 1959:

"1. If an offer of absorption is made which has been based upon the most realistic assessment of conditions which will prevail in 1959, the States cannot be required to make further reductions without damage to the program. It was generally agreed that the average salary used must be completely adequate, that there should be sufficient nonpersonal services money so that it would not be necessary to divert personal services funds and that administrative and staff services should be provided for adequately.

"2. In 1958 staff recruitment lagged behind workload increases because it was difficult to assess the full impact of the downturn and State administrators were reluctant to add staff until they were sure that the downturn was not momentary. The States are now staffing up rapidly as the outlines of the recession become more clear and in the beginning of 1959 should be staffed up for the job to be done in that year. However, the amount of savings due to delay in recruiting staff is likely to be very small in 1959.

"3. Space limitations were a factor in determining the amount of absorption for 1958. The States are resolving this by renting temporary space and for 1959 the budget should provide funds for all the space needed. If funds are available, space limitations should not be a considerable factor in assessing absorption possibilities for 1959.

"4. In 1958 employees are working uncompensated overtime in order to process the workload. For 1959, employees should not be expected to perform work without being paid. Therefore, such savings should not be anticipated in 1959.

"5. In 1958 many employees are working overtime and accruing compensatory time off. Also, annual leave is not being taken as accrued. The time worked by employees under these circumstances contributes to the performance of workload without additional cost or personnel. However, a contingent liability is being created and in 1959 employees should be able to use accrued annual leave or compensatory time.

"6. Consideration should be given to the fact that the percentage of absorption should be smaller as the total load gets larger. For example, it is generally acknowledged that any individual can turn out more work than he normally performs. However, this tolerance factor has been exhausted in the experience of 1958, therefore, that part of the workload increase in 1959 above 1958 performance must be fully financed rather than counting on the same proportion of speed up as occurred in 1958.

"7. Local office management is being financed in 1958 at the 1957 experience level. As new employees are added the needs for supervision and training time become greater. Therefore, for 1959 additional time must be provided.

"8. In 1958 additional employer contact or job development time is being financed within the overall funds available to the State agencies. If all time factors are adjusted realistically, job development time must also be provided forealistically."

We are also requesting restoration of $2,786,000 for nonpersonal services. We have requested $67,052,000 for nonpersonal services including postage for 1959. In the first half of 1958 when insured unemployment averaged 1,400,000 per week expenditures were at the rate of $62 million per year and an annual rate of $63,300,000 has been provided for in the last half of the year. The full amount of the request is needed. The increase over 1958 is primarily for employee retirement contributions which are mandatory and to provide $1,700,000 for rental of additional space so that the workers coming into the local offices can be given service. At the present time important work is being left undone because there is not enough space. The States have begun to rent additional space in the last few months since they have been assured that additional funds would become available. By the beginning of 1959 it is expected that enough space will have been rented to meet the needs of the program.

The last item for which we are requesting restoration is $1,287,000 needed and requested by the State agencies for developing plans, procedures, and standby facilities to assure continuity of the Federal-State employment security program under emergency conditions.

The States have been requested to carry on this work because in an emergency the employment security system would be an important asset for national survival. Without funds the States cannot perform such activities.

MEXICAN FARM LABOR PROGRAM

For the administration of the Mexican farm labor program we are requesting a total of $2,250,000, the same amount as appropriated in 1958, however, for 1959 the request proposes that $1,339,400 be a direct appropriation and that the balance of $910,600 be derived by transfer from the farm labor supply revolving fund. This is the minimum amount required to administer the program regardless of the source of funds.

The House committee recommended a direct appropriation of $480,600 for compliance activities, the amount requested for activity 3, "Determining compliance with contract provisions," and $1,550,000 to be derived by transfer from the farm labor supply revolving fund. The committee stated that the revolving fund moneys paid by the employers should not be used to secure compliance with contract provisions, and that to do so would be placing the employees who are policing the program in the position of being dependent upon fees paid by those being policed for their salaries. We feel the expenses of supervising and policing the program should be by direct appropriation and not more than the costs of the reception centers and migratory stations should be derived from the farm labor supply revolving fund.

The House approved an appropriation of $480,600. The balance recommended by the House committee was stricken by a point of order raised on the House floor. The $480,600 approved by the House will provide for 1 activity only—to determine compliance with contract provisions. Even this amount would give us only one-half the amount necessary to pay for the total number of Foreign Labor Service representatives now budgeted.

When we submitted our appropriation request, we estimated that 450,000 Mexican agricultural workers would be needed by American employers. However, due to the change in economic conditions and the increase in domestic unemployment, the number of such workers contracted will be reduced. How many is difficult to estimate at this time. Many of the unemployed domestic workers are not able or willing to do the "stoop" type of work that Mexican workers usually perform. Also 29 percent of the unemployed workers in the labor force are women who will not be available for agricultural work. Most of the Mexican nationals are used in the southwestern part of the United States while the bulk of unemployment is in the large industrial centers in the northern and eastern parts of the country. Historically our farmers in the Southwest have depended on Mexican nationals to fill a large number of jobs. Since the advent of this program, and the concurrent tightening of the border controls, the wetback has practically disappeared from farm employment in this area.

We plan to intensify the recruitment of unemployed domestic workers and this will reduce the number of Mexican nationals needed. Contracting a smaller number of Mexican nationals will result in some reduction in costs at the reception centers and migratory stations. However, there would have to be a very substantial reduction in the number of workers contracted to affect costs greatly since it would only affect the use of the temporary W. A. E. employees in the reception centers and migratory stations. Our basic staff is required on a year-round basis. The only way we can make a significant reduction in costs would be by closing some of the existing reception centers. Closing any of the centers will result in increased costs to the revolving fund and to the growers because of the greater distances these workers will have to be transported and the longer time involved.

Any reduction that can be made in the cost of operating the centers must be fully utilized to provide a much needed increase in the compliance area to assure that the provisions of the contract are adhered to and that employment opportunities and wages paid domestic workers are not being adversely affected. It might be added here that we have never had a sufficient staff to properly carry out the field activities or to prevent the many complaints received regarding the inadequacy of our coverage of the intricate phases of the compliance program. In addition to the number of foreign labor service representatives which can be employed within this request, more will be needed to enable us to do a more effective job. Therefore, we are preparing a supplemental request for funds which we expect to present to the Congress with our other needs.

We will need the full amount of $2,250,000 requested to properly administer the program regardless of the source of funds. The $480,600 approved by the House means in effect that the program must cease.

GENERAL STATEMENT

Senator HILL. Mr. Goodwin, you may proceed in your own way.

Mr. GOODWIN. Thank you very much, Senator.

We have, as you know, five different appropriations involved, and I would like to comment on some of these and submit full statements in the record, and then answer any questions which the members of the committee might have.

Senator HILL. All right, sir; you go right ahead, sir.

Mr. GOODWIN. Since our 1959 appropriation requests were prepared economic conditions have changed significantly with direct and important effects upon nearly every activity of the Federal-State employment security system.

SOFT SPOTS IN ECONOMY

In the late fall of 1957, when our budget requests were being developed, there were indications that soft spots were beginning to appear in a number of important segments of the economy. Our own data showed that insured unemployment began to rise as early as last September, although there is usually a decline in that month. The volume continued to rise more sharply than usual right up to the time we submitted these budget requests. At that time, however, it was not clear whether the economy was about to enter a recession period or whether the downturn in economic activity might turn out to be a very minor and short-term adjustment.

As the members of the committee know, there has been no clear-cut evidence of recovery in the economy so far this year. Instead, further declines have occurred in some sectors and insured unemployment has risen above earlier expectations. As a result, we are now certain that the funds requested in the budgets before you will not pay for the workloads which are likely to be experienced by the Federal-State employment security system in fiscal year 1959.

Senator IVES. May I interrupt there?

Senator HILL. Certainly.

CUT IN GRANTS TO STATES

Senator IVES. I would like to get this straightened out as we go along. I understand that the amount you people are cut is $24,300,000 in the 1959 budget.

Mr. GOODWIN. That is $24,300,000 on the grants to States.

Senator IVES. I take it you are talking about that, among other things.

Mr. GOODWIN. That is the principal thing we will be talking about here today, Senator, although there are 1 or 2 other points on other requests that we did want to talk about.

Senator IVES. In other words, you are talking now about the cost of your own administration; is that it?

Mr. GOODWIN. No. Up to now I have been laying the groundwork for discussion of all of these, because this is one total system, and all the different requests are affected by the same factors.

Senator HILL. However, the fact is that the Budget allowed you $329,300,000 for the grants to States; did it not?

Mr. GOODWIN. Yes, sir.

Senator HILL. Then the House cut that down to $305 million, or, as the Senator has said, a reduction of $24,300,000.

Mr. GOODWIN. That is right, sir; yes.

While we know that it will be necessary to submit supplemental budget requests, we are not yet in a position to indicate what our additional workload will be nor how much more funds will be needed in fiscal year 1959. The reason we cannot forecast accurately at this time how much more money will be needed is that our workload will depend upon economic developments not only during fiscal year 1959 but also during the rest of this fiscal year.

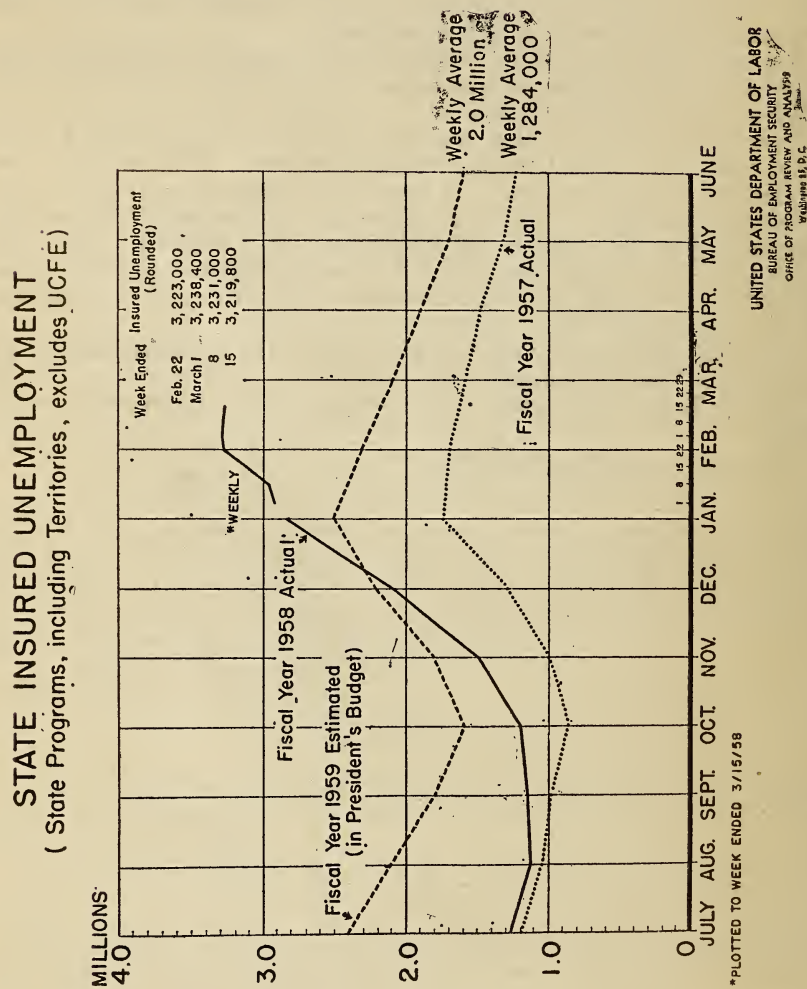
I would like at this point to pause, if I may, Mr. Chairman, and members of the committee, and draw your attention to a chart which I believe has been distributed.

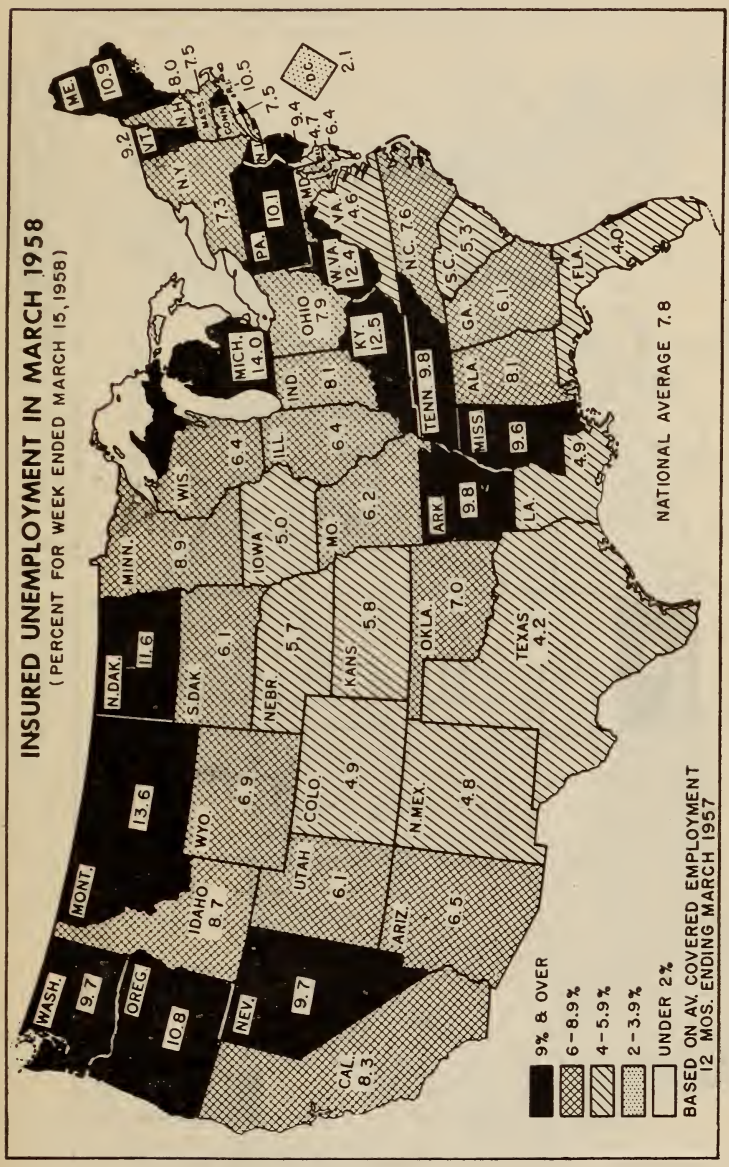
You will notice there that we have charted on the bottom line the fiscal year 1957 actual insured unemployment. Then we have, on the dotted line above that, the fiscal year 1959 as estimated in the President's budget. That you will notice was based upon a weekly average figure on insured unemployment of 2 million. The solid black line is fiscal year 1958, which is an actual figure up to March 15, and you can see that in the last 3 weeks the figure has leveled off and the line has leveled out.

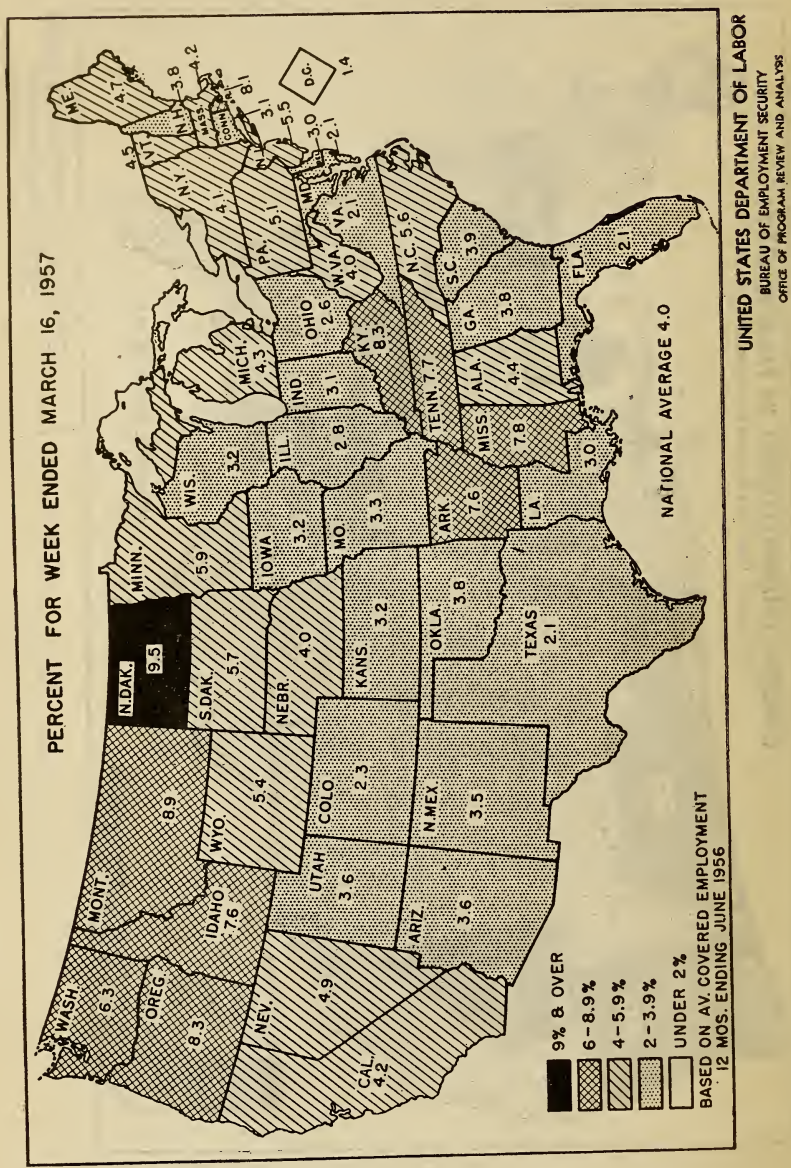
It does indicate clearly how high it is above the prior estimate which is carried in the line below.

Senator HILL. The tables will be inserted in the record at this point.

(The tables referred to follow:)


STATE INSURED UNEMPLOYMENT
(State Programs, including Territories, excludes UCFE)
MILLIONS
4.0
3.0
2.0
1.0
0
Week Ended
Insured Unemployment (Rounded)
Feb. 22 3,223,000
March 1 3,238,400
8 3,231,000
15 3,219,800
*WEEKLY
Fiscal Year 1958 Actual*
Fiscal Year 1959 Estimated (in President's Budget)
Weekly Average 2.0 Million
Weekly Average 1,284,000
Fiscal Year 1957 Actual
JULY AUG. SEPT. OCT. NOV. DEC. JAN. FEB. MAR. APR. MAY JUNE
1 8 15 22 1 8 15 22 29
*PLOTTED TO WEEK ENDED 3/15/58
UNITED STATES DEPARTMENT OF LABOR
BUREAU OF EMPLOYMENT SECURITY
OFFICE OF PROGRAM REVIEW AND ANALYSIS
Washington 25, D.C.


INSURED UNEMPLOYMENT IN MARCH 1958
(PERCENT FOR WEEK ENDED MARCH 15, 1958)
WASH. 9.7
OREG. 10.8
NEV. 9.7
CAL. 8.3
IDAHO 8.7
MONT. 13.6
WYO. 6.9
UTAH 6.1
COLO. 4.9
ARIZ. 6.5
N.MEX. 4.8
N.DAK. 11.6
S.DAK. 6.1
NEBR. 5.7
KANS. 5.8
OKLA. 7.0
TEXAS 4.2
MINN. 8.9
IOWA 5.0
MO. 6.2
ARK. 9.8
LA. 4.9
WIS. 6.4
ILL. 6.4
MISS. 9.6
MICH. 14.0
IND. 8.1
TENN. 9.8
ALA. 8.1
OHIO 7.9
KY. 12.5
GA. 6.1
FLA. 4.0
N.C. 7.6
S.C. 5.3
W.VA. 12.4
VA. 4.6
PA. 10.1
N.Y. 7.3
VT. 9.2
N.H. 8.0
ME. 10.9
MASS. 7.5
CONN. 10.5
R.I. 7.5
N.J. 9.4
MD. 4.7
D.C. 2.1
9% & OVER
6-8.9%
4-5.9%
2-3.9%
UNDER 2%
BASED ON AV. COVERED EMPLOYMENT
12 MOS. ENDING MARCH 1957
NATIONAL AVERAGE 7.8
UNITED STATES DEPARTMENT OF LABOR
BUREAU OF EMPLOYMENT SECURITY
OFFICE OF PROGRAM REVIEW AND ANALYSIS


PERCENT FOR WEEK ENDED MARCH 16, 1957
UNITED STATES DEPARTMENT OF LABOR
BUREAU OF EMPLOYMENT SECURITY
OFFICE OF PROGRAM, REVIEW AND ANALYSIS
NATIONAL AVERAGE 4.0
9% & OVER
6-8.9%
4-5.9%
2-3.9%
UNDER 2%
BASED ON AV. COVERED EMPLOYMENT
12 MOS. ENDING JUNE 1956
ME. 4.7
N.H. 3.8
VT. 4.5
MASS. 4.2
CONN. 8.1
R.I. 3.1
N.Y. 4.1
N.J. 5.5
PA. 5.1
D.C. 1.4
MD. 3.0
DEL. 2.1
W.VA. 4.0
VA. 2.1
N.C. 5.6
S.C. 3.9
GA. 3.8
FLA. 2.1
ALA. 4.4
MISS. 7.8
LA. 3.0
TEXAS 2.1
OKLA. 3.8
ARK. 7.6
TENN. 7.7
KY. 8.3
OHIO 2.6
IND. 3.1
MICH. 4.3
ILL. 2.8
WIS. 3.2
MINN. 5.9
N.DAK. 9.5
S.DAK. 5.7
NEBR. 4.0
IOWA 3.2
MO. 3.3
KANS. 3.2
COLO. 2.3
N.MEX. 3.5
ARIZ. 3.6
UTAH 3.6
WYO. 5.4
IDAHO 7.6
MONT. 8.9
NEV. 4.9
CAL. 4.2
OREG. 8.3
WASH. 6.3

CATEGORIES COVERED IN TABLES PRESENTED

Senator IVES. Mr. Chairman, I would like to ask a question, if I may.

Senator HILL. Certainly.

Senator IVES. In those figures given up at the top are you including there that amount of unemployment insurance which has already expired?

Mr. GOODWIN. No.

Senator IVES. In Michigan, for example, Senator Potter told us this morning that 2,500 cases were expiring each week now out there.

Mr. GOODWIN. These figures do not include the exhaustions.

Senator IVES. Then the amount is a great deal more than the 2 million, is it not?

Mr. GOODWIN. Yes, sir. That only covers the insured.

Senator IVES. The amount that is insured is still payable.

Mr. GOODWIN. Yes, sir.

Senator IVES. Have you any idea what the total is?

Mr. GOODWIN. The total is covered by the figure published by the Bureau of the Census.

Senator IVES. I am talking about the unemployment insurance coverage. Have you any idea what the total is?

Mr. GOODWIN. No.

Senator IVES. As to that amount you have here, 3,219,800 plus those people that you no longer cover because their insurance has expired, have you any idea what that is?

Mr. GOODWIN. We have the figures on exhaustions. We know how many by weeks and months exhausted their insurance benefits. The figure we don't have, and we have no way of obtaining, is the number that go back to work.

Senator IVES. That was my next question I was going to ask you.

Mr. GOODWIN. We do not know the number that go back to work.

Senator IVES. Offhand, can you guess as to what the total is that I asked in the first place, that first question I asked you? I am not talking about those that go back to work, because I realize you do not know that. I am talking about the ones that are listed here plus the ones whose insurance has expired and they cannot get any more.

Mr. GOODWIN. We do not have what I would regard as a reliable estimate on that.

Senator IVES. Thank you.

NUMBERS DRAWING UNEMPLOYMENT COMPENSATION

Senator HILL. The 3,219,000 are those who are now drawing unemployment compensation?

Mr. GOODWIN. That is right, sir, yes.

Senator HILL. How many of them have drawn it and their insurance has run out? That is what you do not know?

Mr. GOODWIN. That is what we don't know.

One hundred and forty-five thousand exhausted their benefits in February for the country as a whole.

Mr. KEENAN. And 147,000 in January.

Mr. GOODWIN. In February, as I said, 145,000.

Senator IVES. Is it exaggerating to guess that probably almost half a million have exhausted their insurance since this thing started at the end of last year?

Mr. KEENAN. Exhaustions ran much lighter in the latter months of 1957 because with the average duration that exists in those States an individual is on file a few weeks before he does exhaust. So the rate of exhaustion came up in January and February, and if unemployment continues the exhaustion will tend to become a more serious factor in May and June. It could be as high as 500,000. I think that probably is a little high.

Senator IVES. The reason I am raising this question is because the legislation which is proposed by which the Federal Government would enter this picture provides for insurance for the rest of the year where it has been exhausted. You are planning for that undoubtedly.

PROJECTED UNEMPLOYMENT FOR REMAINDER OF YEAR

I was wondering what the figure is you have for that. Is that 500,000 that you are figuring now for the rest of the year? What are you figuring out?

Mr. KEENAN. More than that, sir. In the figure that was set up in the administration bill there was an estimate for the period covered by the bill that exhaustion would run in the neighborhood of 2½ million.

Senator IVES. I know, but they must have gotten their figures from you, did they not?

Mr. KEENAN. Yes, sir.

Senator IVES. Those are your figures then, are they not?

Mr. KEENAN. That is an estimate for the period ahead. If the unemployment continues, when there are more than 3 million drawing benefits now, you can figure your average duration, and you can tell that approximately so many will exhaust in May, so many in June. Or, if you figure a rate or several estimates of unemployment for the year, you can make alternate estimates of exhaustion for the period of 8 or 10 months ahead.

Senator IVES. In this basis of your statement what are you figuring? When is the recovery going to occur? I take it sometime it is going to happen. Are you looking for it in the fall?

Mr. KEENAN. I cannot tell you.

Senator IVES. You are not expecting a continual increase in unemployment all through the year, are you?

Mr. KEENAN. No, sir.

Senator IVES. Probably not beyond summer, are you?

Mr. GOODWIN. Of course, what you get, Senator, on the exhaustions is, you get a lag, and, with the unemployment that we have now, more exhaustions will occur beginning this summer. So, even though we were to get improvement in the economic situation beginning in the summer, we can expect the exhaustion rate to continue to go up for several months after.

Senator IVES. I can understand that, too.

ESTIMATED FEDERAL FUNDS REQUIRED

Based on your estimates, which I assume the administration is taking, what do you anticipate will be the requirement in the way of any amount of money the Federal Government may have to provide these States who are going to run out?

Mr. GOODWIN. The estimate that Secretary Mitchell made when he appeared before the Ways and Means Committee in support of the administration bill last Friday was $586,771,000 for extending benefits for an additional amount equal to 50 percent of the duration given by the State law.

Senator IVES. You say Secretary Mitchell made that statement?

Mr. GOODWIN. Yes, sir.

Senator IVES. I take it those are your figures then.

Mr. GOODWIN. We helped in the estimates.

Senator IVES. Thank you.

Senator HILL. For what period of time now would that $583 million take care of the increased coverage?

Mr. GOODWIN. I didn't understand the question, Senator.

Senator HILL. As I understood, Secretary Mitchell estimated it would cost $587 million for extending the insurance in the different States.

Mr. GOODWIN. Yes.

Senator HILL. For how long a period of time?

Mr. GOODWIN. A maximum of 13 weeks. But the Federal Government would increase whatever the State gave by adding 50 percent. In other words, if a person received 26 weeks duration from the State and then exhausted his benefits under this proposal he would be entitled to an additional 13 weeks.

Senator IVES. A bill has been introduced that would require the Federal Government or cause the Federal Government to take action to provide such funds for the rest of the year; no 50 percent increase at all. You know that. I think Senator Case is the chief sponsor of it. Have you any idea what that would cost?

Mr. GOODWIN. I don't know. Mr. Brown, the Assistant Secretary, is here. He was with the Secretary at the time of this testimony.

Senator IVES. The reason I am raising these points is because they are points coming up on the floor.

Mr. BROWN. I think we have estimates. I think it is about $638 million.

Senator IVES. I imagine that is about right.

Mr. BROWN. Because that, I believe, has a cutoff date of December 31. Our bill carries through until April 1, 1959.

Senator IVES. But yours is only 50 percent.

Mr. BROWN. Yes; of what the State would have granted.

Senator IVES. Thank you.

Excuse me, Mr. Chairman.

Senator HILL. That is all right. As you say, these questions are all going to come up.

Senator IVES. Yes, we are all going to get hit with them on the floor.

Senator HILL. In fact, they are already here.

Senator IVES. They are.

Senator HILL. All right, Mr. Goodwin.

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Mr. GOODWIN. I wanted to finish this point merely by saying that at this point in time we cannot estimate just what our needs will be next year, and it is the considered judgment within the Department that we should not undertake to do so. When the picture clears a bit more, then we will make our estimates and come back on a supplemental for 1959.

Senator IVES. While you are on that let's clear up another thing, Mr. Chairman.

APPEAL FROM HOUSE ACTION

You are getting to the total here where the cut of $24,300,000 shows up. Are you satisfied with the net figure as allowed you by the Appropriations Committee of the House or the House itself? Do you think it is enough for the time being? Are you satisfied that that is enough for this bill, or are you counting on a supplemental bill to make it up?

Mr. GOODWIN. No. We are appealing part of that cut. We are not asking for any increase for processing unemployment workloads beyond the 2 million which we originally requested. We say that the cut would not leave us with enough money to do the job even with 2 million insured unemployed, and we are asking for part of the cut to be restored.

Senator HILL. You are asking for $11,800,000.

Mr. GOODWIN. Yes. We are asking for $11,800,000 restored of the $24 million cut.

Senator IVES. That will satisfy you for the time being? You are not sure then, though, that that is going to be sufficient, are you?

Mr. GOODWIN. That would give us money enough in our opinion to handle a workload averaging 2 million.

Senator HILL. Which was your original estimate.

Mr. GOODWIN. Which was our original estimate. As soon as we have a better estimate as to exactly what the workload will be, we anticipate coming back on a supplemental.

Senator HILL. That is what the Secretary suggested this morning, too.

Mr. GOODWIN. Yes, sir.

JUSTIFICATION FOR RESTORATION

I think I might as well go right ahead with this State grant problem, now that we have gotten into it, and give you the reasons why we think we need this $11.8 million back.

GRANTS TO STATES FOR UNEMPLOYMENT COMPENSATION AND EMPLOYMENT SERVICE ADMINISTRATION

Senator HILL. We will insert at this point in the record the usual tables and material, together with the prepared statement of Mr. Goodwin.

(The material referred to follows:)

"[APPROPRIATION ESTIMATE]

"GRANTS TO STATES FOR UNEMPLOYMENT COMPENSATION AND EMPLOYMENT SERVICE ADMINISTRATION

"[Grants to States for unemployment compensation and employment service administration:] For grants in accordance with the provisions of the Act of June 6, 1933, as amended (29 U. S. C. 49–49n), for carrying into effect section 602

of the Servicemen's Readjustment Act of 1944, for grants to the States as authorized in title III of the Social Security Act, as amended (42 U. S. C. 501–503), including, upon the request of any State, the purchase of equipment, and the payment of rental for space made available to such State in lieu of grants for such purpose, for necessary expenses including purchasing and installing of air-conditioning equipment in connection with the operation of employment office facilities and services in the District of Columbia, and for expenses not otherwise provided for, necessary for carrying out title IV of the Veterans' Readjustment Assistance Act of 1952 (66 Stat. 684) and title XV of the Social Security Act, as amended (68 Stat. 1130), [$259,814,000] *$329,300,000*, of which $10,000,000 shall be available only to the extent necessary to meet increased costs of administration resulting from changes in a State law or increases in the numbers of claims filed and claims paid or increased salary costs resulting from changes in State salary compensation plans embracing employees of the State generally over those upon which the State's basic grant (or the allocation of the District of Columbia) was based, which increased costs of administration cannot be provided for by normal budgetary adjustments: *Provided*, That notwithstanding any provision to the contrary in section 302 (a) of the Social Security Act, as amended, the Secretary of Labor shall from time to time certify to the Secretary of the Treasury for payment to each State found to be in compliance with the requirements of the Act of June 6, 1933, and, except in the case of Puerto Rico, Guam, and the Virgin Islands, with the provisions of section 303 of the Social Security Act, as amended, such amounts as he determines to be necessary for the proper and efficient administration of its unemployment compensation law and of its public employment offices: *Provided further*, That such amounts as may be agreed upon by the Department of Labor and the Post Office Department shall be used for the payment in such manner as said parties may jointly determine, of postage for the transmission of official mail matter in connection with the administration of unemployment compensation systems and employment services by States receiving grants herefrom.

"In carrying out the provisions of said Act of June 6, 1933, the provisions of section 303 (a) (1) of the Social Security Act, as amended, relating to the establishment and maintenance of personnel standards on the merit basis, shall apply.

"None of the funds appropriated by this title to the Bureau of Employment Security for grants-in-aid of State agencies to cover, in whole or in part, the cost of operation of said agencies including the salaries and expenses of officers and employees of said agencies, shall be withheld from the said agencies of any States which have established by legislative enactment and have in operation a merit system and classification and compensation plan covering the selection, tenure in office, and compensation of their employees, because of any disapproval of their personnel or the manner of their selection by the agencies of the said States, or the rates of pay of said officers or employees.

"Grants to States, next succeeding fiscal year: For making, after May 31 of the current fiscal year, payments to States under title III of the Social Security Act, as amended, and under the Act of June 6, 1933, as amended, for the first quarter of the next succeeding fiscal year, such sums as may be necessary, the obligations incurred and the expenditures made thereunder for payments under such title and under such Act of June 6, 1933, to be charged to the appropriation therefor for that fiscal year."

Amounts available for obligation

1958 actual appropriation	$259, 814, 000
1958 supplemental appropriation	33, 000, 000
Total funds available	292, 814, 000
Revised base 1958	292, 814, 000
1959 budget estimate	329, 300, 000
Change requested for 1959	+36, 486, 000
House allowance for 1959	305, 000, 000
House change over revised base 1958	+12, 186, 000

Obligations by activities

	Revised base, 1958	Budget estimate, 1959	House allowance
1. Unemployment compensation	$174,083,000	$188,327,000	$174,019,000
2. Employment service	87,266,000	98,496,000	90,991,000
3. State administration	26,104,000	29,296,000	27,052,000
4. Veterans unemployment compensation	2,720,000	1,279,000	1,181,000
5. Unemployment compensation for Federal employees	2,641,000	1,902,000	1,757,000
6. Contingency fund		10,000,000	10,000,000
Total obligations	292,814,000	329,300,000	305,000,000

Obligations by objects

	Revised base, 1958	Budget estimate, 1959	House allowance
Summary of personal services:			
Tota number of permanent positions	133	133	133
Full-time equivalent of all other positions			
Average number of all employees	130	130	130
Direct obligations:			
Personal services	$663,600	$663,600	$663,600
Travel	2,000	2,000	2,000
Communication services	15,000	15,000	15,000
Rents and utilities services	120,000	120,000	120,000
Printing and reproduction	10,000	10,000	10,000
Other contractual services	15,000	15,000	15,000
Supplies and materials	6,000	6,000	6,000
Equipment		5,000	5,000
Grants, subsidies and contributions	291,982,300	328,463,300	304,163,300
Taxes and assessments	100	100	100
Total	292,814,000	329,300,000	305,000,000

Summary of changes

	Amount
1958 actual appropriation	$259,814,000
1958 supplemental appropriation	33,000,000
Total funds available	292,814,000
1959 budget estimate	329,300,000
Change requested for 1959	+36,486,000

Summary of changes—Continued

	Budget estimate, 1959, amount	House allowance, amount
INCREASES		
For mandatory items:		
Retirement contribution annualization rate of 6.5 percent in 1959 and 6.25 percent in 1958	$1,600	$1,600
For program items:		
For tax collection workload increases related to 100,000 more employers and 800,000 more workers	1,113,700	1,113,700
For a 200,000 workload increase in the employment counseling function, especially in connection with employment of older workers and handicapped persons	597,700	597,700
To obtain, on a continuing basis, current and accurate job requirement data to make placement and counseling services more effective	240,800	240,800
For increasing the number of housing inspections and wage determinations which are made prior to the placement of domestic migrant farmworkers, and expanding employment services in smaller areas of unemployment and underemployment	1,216,900	1,216,900
For improving personnel management in the State agencies by improving the skills of State agency employees	500,000	500,000
For developing plans and obtaining facilities to assure continuity of the employment security program under emergency conditions	1,287,000	----------
For nonpersonal service costs, mainly for mandatory contributions to State retirement funds, and for rents of premises	3,494,300	708,300
For additional time required to restore operating effectiveness in 1959. In 1958 it was necessary to make undesirable shortcuts in operations because of lack of staff and space. However, in the last half of fiscal year 1958 this condition is being corrected; additional funds made available in the supplemental appropriation has made it possible to hire additional staff and rent more space	20,227,000	----------
For the contingency fund	10,000,000	10,000,000
Subtotal	38,677,400	14,377,400
Total increases	38,679,000	14,379,000
DECREASES		
For decrease in the cost of administration of the UCV and UCFE programs due to anticipated reduction in benefit payments	2,193,000	2,193.000
Net change	+36,486,000	+12,186,000

EFFECT OF HOUSE ACTION

The $24,300,000 reduction by the House would be distributed as follows:

1. An "across the board" cut of $20,227,000 would be necessary.
2. The $1,287,000 requested for developing plans and obtaining standby facilities to assure the continuance of State operations under emergency conditions, this amount would be entirely eliminated.
3. Funds for nonpersonal services would be reduced by $2,786,000.

Discussion of item 1, "Across the board" cut of $20,227,000

The House action on this item was based on the reason "that the unit costs of handling unemployment claims goes down as the number of claims increases." We agree with this position. However, we estimate the saving will be about $12,500,000 instead of $20,227,000. Restoration is therefore requested of the $7,727,000 difference.

The restoration of $7,727,000 of the House reduction will enable the States to continue the improvement in operating effectiveness being attained in the latter part of fiscal year 1958 and to make other important changes which will achieve more effective operations in 1959 and will help to guard against improper payments.

In the last month we have consulted with representatives of State employment security agencies about this problem. Because of the sharp speedup in operations the States have been hampered by lack of space, manpower, and skill of available employees. In 1959, especially after the labor market improves in the latter part of the year and space and personnel problems are resolved, more benefit-rights interviews and periodic interviews should be given. At the present time a large number of skimpy new applications with little placement value are being taken because of the pressures of large numbers of workers in the office. These applications should be usable for placement and more time should be provided in 1959.

Discussion of item 2, $1,287,000 for planning continuance of State operations under emergency conditions

As stated earlier, the House action would completely eliminate this item. We hope that it will be restored. At present the State agencies are required to do this emergency planning work but they are not provided the needed financial support. As a result the work isn't being done to the extent that it should be, and what little of it is done the States do at the expense of their regular employment security work. The amount involved is not large. This is an important activity which should be properly financed.

Discussion of item 3, $2,786,000 for nonpersonal services

Two categories of nonpersonal service expense would be most affected by the House reduction: (1) mandatory contributions to State employee retirement funds and (2) rent of premises.

An additional $1,700,000 is requested in the budget for rent of additional space. Lack of adequate space has been one of the serious limiting factors which prevented the States from being better prepared to meet the high unemployment workoad this year. The States have been correcting this situation in the last few months. They started leasing additional space as soon as they knew that additional funds would become available from this year's supplemental appropriation. By the beginning of 1959 it is expected that enough space will have been rented to meet the needs of the program. This additional space will, of course, increase the cost of rent in 1959. The additional funds requested for this purpose is therefore still needed.

Additional funds will also be needed for mandatory contributions to State employee-retirement funds. The budget request, as here amended, would provide approximately an additional $9 million for personal-service costs. Contributions to State employee-retirement funds would go up in proportion to this increase in personal-service costs.

EFFECT OF HOUSE ACTION BY ACTIVITY

Activity 1, unemployment insurance

Decreases: Funds for the activity would be reduced by approximately $14,308,000 as a result of the House action. This is a pro rata share of the $24,300,000 total reduction made by the House.

The reduction would probably have an adverse effect on all the functions in the activity—claims taking, the handling of disputed claims, work on overpayment and fraud cases, and tax collections. The claims-taking function would probably be hardest hit, and the experience in the past has been that this usually results in a greater number of erroneous benefit payments, and an increase in the payment of fraudulent claims.

Increases: The $1,113,700 required for increases in the tax-collection and wage-record workloads was allowed by the House.

Activity 2, employment service

Decreases: Funds for the activity would be reduced by approximately $7,505,000 as a result of the House action. This is a pro rata share of the $24,300,000 total reduction made by the House.

The reduction would probably have an adverse effect on all the functions in the activity—the taking of applications for work, employment counseling and testing work, development of job opportunities for persons seeking jobs, and placement of nonagricultural workers. Efforts to find placements for older workers and handicapped persons may also be adversely affected by the reduction.

Increases: The House action would allow the $597,700 required for workload increases in the employment counseling function, especially in connection with employment of the older workers and handicapped persons; the $240,800 needed for obtaining current and accurate job requirement data to make placement and counseling services more effective; and the $1,216,900 needed for increasing the number of housing inspections and wage determinations which are made prior to the placement of domestic migrant farmworkers, and expanding employment services in smaller areas of unemployment and underemployment.

Activity 3, State administration

Decreases: Funds for the activity would be reduced by approximately $2,244,000 as a result of the House action. This is a prorata share of the $24,300,000 total reduction made by the House.

The reduction would have an adverse effect on the management and supervision of local offices, on labor-market research activities, and on housekeeping services.

Increases: The House action would allow the $500,000 required for improving personnel management in the State agencies by improving the skills of State-agency employees.

Activity 4, veterans' unemployment compensation

Decreases: Funds for the activity would be reduced by approximately $98,000 as a result of the House action. This is a prorata share of the $24,300,000 total reduction made by the House. The $98,000 reduction would be in addition to the $441,000 reduction from the 1958 base proposed in the budget.

The reduction would have an adverse effect on the handling of veterans' unemployment compensation claims, and could result in increasing the number of erroneous benefit payments, and payment of fraudulent claims.

Activity 5, unemployment compensation for Federal employees

Decreases: Funds for the activity would be reduced by approximately $145,000 as a result of the House action. This is a prorata share of the $24,300,000 total reduction made by the House. The $145,000 reduction would be in addition to the $739,000 reduction from the 1958 base proposed in the budget.

The reduction would have an adverse effect on the handling of unemployment compensation claims from Federal employees, and could result in increasing the number of erroneous benefit payments and payment of fraudulent claims.

Statement of Robert C. Goodwin, Director, Bureau of Employment Security, on the 1959 Request for Grants to States for Unemployment Compensation and Employment Service Administration

Mr. Chairman, for grants to the States for administration of their employment service and unemployment insurance programs, we are requesting $329,300,000. This is an increase of $36,486,000 over the $259,814,000 appropriated and the supplemental amount of $33 million requested for 1958. The 1958 appropriation of $259,814,000 was predicated upon the continuance of the kind of economy which prevailed early in 1957 when insured unemployment was expected to average 1,225,000 per week for the year. Insured unemployment in 1957 averaged 1,284,000 per week and is now expected to average 2 million per week in 1958 and 1959.

ECONOMIC CHANGES AFFECT EMPLOYMENT SECURITY WORKLOADS

Almost any change in economic activity that involves employment and unemployment results in immediate changes in the volume and nature of the activities in the employment security office in the locality where it occurs. While it was not until the fall of 1957 that these changes in economic activity became evident

in the figures for the country as a whole, adjustments in some segments of the economy began much earlier. These were, in general, obscured by the continuing expansion in other sectors of the economy.

Industrial production, for example, reached a peak in December 1956 and then leveled off. In the October–December 1957 period it declined somewhat. Nondurable goods production leveled off even earlier and has shown no significant change in the last 2 years. Housing construction, as you know, reached its peak at more than 1,300,000 new units in 1955 and then edged off to about 1,100,000 in 1956 and 1 million in 1957. As a result activity in the logging and lumbering industries declined and the Pacific Northwest experienced an early rise in unemployment. Federal expenditures for goods and services declined in the July–September, 1957 period and dropped again in the October–December quarter. Expenditures for new plant and equipment also dropped in the October–December quarter.

As a result of these and other actions in the economy, the number of claims for unemployment insurance benefits and new applications for work filed in the State employment security local offices began to increase. These increased workloads first became apparent on a national scale last September. Usually, national totals of insured unemployment decline each week in August and September. This year the volume of insured unemployment diminished as usual in August but rose each week in September and it has continued to rise at a much greater rate than is customary since that time. The suddenness of the impact is indicated by the fact that, on a seasonally adjusted basis, total nonagricultural employment dropped by more than 500,000 during the October–December 1957 quarter.

The States were not able to staff up quickly to meet this problem for a number of reasons. First, the increase in claims workloads did not become significant until the end of the July–September 1957 quarter. Second, by the time the increase in workloads had become substantial most of the contingency fund had been committed to pay for statewide salary increases and for the cost of changes in State unemployment insurance laws. Therefore, the State agencies had no assurance of receiving additional funds to pay for more employees to process the larger claims and job application workloads. Also, many State laws, like the Federal law, do not permit overobligation of funds. As a result, the States did what they have done historically in these circumstances. They used shortcuts in taking and processing unemployment insurance claims and employment service personnel were used to take claims for unemployment insurance. Decimating the employment service at the very time when it should be making a sustained and strong effort to find jobs for unemployed workers is not in the national interest.

Furthermore, while some shortcuts may not result in harm over a short period of time, if continued for a longer period they can result in losses to the unemployment trust fund. In a period of high unemployment particular care must be taken to maintain the integrity of the program.

Several figures which I quoted in my statement on the appropriation request for salaries and expenses bear repetition now to emphasize the importance of what I have just said. They point up the tremendous job which faces the program in the period ahead. In the January–June 1958 period the State agencies are expected to pay out $1,633 million in benefit payments, $682 million or 72 percent more than was paid out in the comparable period last year. In 1959, the State agencies will collect $1,550 million in unemployment taxes for deposit in the unemployment trust fund and pay out $2,500 million in benefit payments to millions of unemployed workers who are temporarily without jobs because of adjustments in the economy. When such large amounts of money are involved the integrity of the program is a matter of prime importance to our people. When millions of people are unemployed and collecting benefits it is also a matter of concern to them and to the Nation that they get assistance in finding jobs at the earliest possible moment. The 1959 request will allow the State agencies to process the unemployment insurance workloads in a manner which will protect the integrity of the program.

IMPROVEMENT OF ECONOMY IN 1959

The appropriation request for 1959 is based upon a reversal of the unemployment pattern which is taking place in 1958. In 1958, insured unemployment is expected to be substantially greater in the second half of the year than it was in the first half. In 1959 it is assumed that, on a seasonally adjusted basis, there will be a steady improvement which, by the end of the year, will bring the economy back to higher levels of activity. A number of factors are likely to limit the extent

of the economic decline this fiscal year and to speed the recovery in 1959. Market adjustments are likely to be of the "rolling" variety with different industries making adjustments at different times. It is assumed that early in 1959 an upward trend will have been resumed in construction, logging and lumbering, steel, and most consumer and producer durable goods manufacturing.

Because of the "rolling" nature and relatively short duration of the economic adjustments and the steady improvement in job opportunities assumed during 1959, placement activities are expected to remain at high levels. The extent and speed of economic improvement may vary markedly among major labor market areas, depending upon their industrial pattern and competitive position, changes in production techniques, and shifts in the demand for goods and services.

CLAIMS AND BENEFIT PAYMENT INCREASES

Workloads related to the collection of taxes are expected to increase moderately as a result of the normal growth in the number of employers and workers subject to State unemployment insurance laws.

The unemployment compensation claims and benefit workloads for 1959 have been estimated on the basis of a weekly average of insured unemployment of 2 million. This average takes into account the assumed downward movement in insured unemployment from the relatively high levels in the last months of 1958.

INCREASE OVER 1958 APPROPRIATION

To process the workloads which will arise from an insured unemployment average of 2 million per week will require $53,227,000 more in 1959 than was appropriated for 1958.

CONTINGENCY FUND

We are also requesting $16,459,000 more for 1959. Of this amount $10 million will be for a contingency fund to pay for the cost of unforeseen increases in claims workloads, State law changes and for statewide salary increases. The contingency fund appropriated for 1958 was, as I mentioned earlier, exhausted at the beginning of the year. The balance of the increase, $6,459,000, is made up of some small upward changes partially offset by some decreases.

TAX COLLECTION AND WAGE RECORD FUNCTIONS

About $1.1 million of the additional funds needed in 1959 are for increased workloads in the tax collection and wage record functions. These workloads are primarily influenced by changes in the number of covered employers and workers. For 1959, because of the assumed recovery in the economy, normal growth is projected in the number of taxable employers and workers. Therefore the State agencies will be required to make 20,000 more employer status determinations, process 200,000 more employer tax returns, process 3 million more wage items, and audit the records of 25,000 more employers. A number of the employers to whom coverage was extended in the last 2 years will be subject to their first audit in 1959.

EMPLOYMENT COUNSELING

An increase of $597,700 is needed to meet the demand for employment counseling services for youth, the physically handicapped, and older workers.

YOUTH

The employment counseling service helps young persons to understand their abilities and potentials, and to make better vocational choices. The service takes on added importance today because of the urgent need to identify, at a relatively early age, individuals who have the aptitudes required for scientific, engineering, and other technical occupations—and because it is important today that we make the best possible use of all our human resources. Graduating students in about 7,300 high schools were given employment counseling services in the 1956–57 school year. This is only about a third of the Nation's 23,300 high schools. The number of young persons in need of the service will increase in the years ahead as the country's young population increases. More of the young persons who drop out of school also need to be given employment counseling; by helping them to get into suitable employment, many of them can be helped to avoid becoming involved in juvenile delinquency.

It is estimated that in 1959 about 440,000 employment counseling interviews will be given to about 293,000 youths under 21; this is an increase over 1958 of about 70,000 interviews.

PHYSICALLY HANDICAPPED

Counseling also helps in the employment adjustment of the handicapped persons who must find new occupational outlets for their capacities and abilities after recovering from illness or accident. An increasing number of handicapped applicants are being served by the local offices—about 32 percent more than in 1954—persons with cardiac illness, epilepsy, arthritis, or with some disability resulting from an accident. Many of them have severe disabilities and complex vocational problems, and about 50 percent of them require intensive employment counseling. The expansion of the vocational rehabilitation programs under the stimulus of Public Law 565 enables a greater number of handicapped individuals to enter the labor market. They look to the local employment offices for assistance in finding jobs which will utilize their skills and physical capacities. Between 1954 and 1957 placements of handicapped workers increased by nearly 50 percent.

It is estimated that in 1959 about 425,000 employment counseling interviews will be given to about 283,000 handicapped individuals; this is an increase over 1958 of about 42,500 interviews.

OLDER WORKERS

As you know, studies have shown that workers 45 years of age and over have considerable difficulty finding jobs if they become unemployed. About 18 months ago the Bureau and the States inaugurated a more intensive program for helping such workers find employment. Specialists have been designated in each State central office—and in local employment offices in major cities throughout the country—to give special attention to the employment problems of this group. A large proportion of the older workers need employment guidance and counseling, as well as job development and placement services, if they are to find employment. In addition, it is necessary to continue the program inaugurated about a year ago to help counter the unfavorable attitudes about the abilities and characteristics of older workers that are so often reflected in employment policies.

It is estimated that in 1959 about 505,000 employment counseling interviews will be given to about 337,000 older workers; this is an increase over 1958 of about 67,500 interviews.

OCCUPATIONAL ANALYSIS

The effectiveness of the 1,800,000 employment counseling interviews and the 6,100,000 nonagricultural job placements estimated for 1959 depend on having current and accurate information about job requirements. Technological changes in such industries as automobile and aircraft manufacturing, chemicals, metal processing, and others utilizing assembly line techniques have made the job information now available out of date. In addition, developments in such fields as automation, electronics, missiles and civilian uses of atomic energy are creating many new jobs about which the Employment Service has inadequate information. To fill the gap and to insure that current and accurate job information is available on a continuing basis, it is estimated that about $240,000 will be needed for the employment of about 50 additional occupational analysts in selected State agencies.

FARM PLACEMENT

We are requesting an increase of 250 man-years for a total of 1,600 man-years for the Farm Placement Service in the State employment security agencies. Of this increase 100 man-years is required to assure that housing and wage rates offered to migrant workers are adequate, and that out-of-area workers are recruited only for jobs where adequate housing and wage rates are offered. This increase is necessary to aid in the recruitment of domestic farmworkers. Currently, we are dealing with about 350,000 to 400,000 migrant farmworkers each year. We must make every effort to see that wages and conditions of work offered to migrant workers are attractive so that we will be able to make full use of job opportunities to attract American workers.

The balance of the increase, 150 man-years, is for expanding employment services to small areas where there is substantial and persistent unemployment and underemployment. With funds currently available we have not been able to provide these small towns and rural areas with the intensive services which are needed if the problems of unemployment and underemployment are to be allevi-

ated. We propose to work with existing community organizations and where such organizations are not in being, to stimulate their creation. After analyzing the aptitudes and skills of the work force and resources of the community the data can be helpful to industrial organizations interested in new plant locations. Also, where the area does not provide ample job opportunities workers will be referred to job opportunities in agriculture and industry in other areas. Work must begin now to take advantage of future opportunities for employment.

IMPROVING PERSONNEL MANAGEMENT

An increase of $500,000 is being requested to improve the skills of the employment security personnel. It is clearly apparent that the State agencies need to devote greater time, energy, and resources to improvement of management and personnel. The expansion and greater complexity of the employment security program has created additional demands and challenges for management at both State and local levels. At the same time there is a continuing scarcity of qualified supervisory personnel needed to replace present management staff who are retiring in increasing numbers. A major effort should be made to improve the quality of personnel management programs, particularly with respect to staff recruitment, retention, and development. This will require the addition in many State agencies of qualified personnel technicians who can assist in developing and carrying out broader and more effective programs.

Emphasis in staff development should be given to improving the professional and technical competence of personnel through enabling them to take academic training that is recognized as closely related to their functions. Management and employment counseling are outstanding examples of functions for which special and advanced courses are widely available. The Bureau, therefore, plans to encourage and further stimulate staff development activity, in such areas, through specific grants for the purpose of specialized training. Greater attention will also be given to the identification of specialized qualification requirements and training needs and opportunities related to other functions, in order to pemit broader and more effective State action to improve staff competence and performance.

FEDERAL UNEMPLOYMENT INSURANCE PROGRAMS

Since the request for benefit payments for the UCV and UCFE programs in 1959 are substantially less than estimated expenditures in 1958, there will be a $2,193,000 reduction in the cost of administration.

CONTINUITY OF EMPLOYMENT SECURITY IN AN EMERGENCY

We are requesting $1.3 million for the State agencies to carry out the planning and developmental work which is essential to insure the uninterrupted operation of the employment security system in the event of an enemy attack of massive proportions. This developmental work will also provide for the modification and adaptation of employment security programs to meet the needs of a critical international situation, of an actual attack on the Nation or other major disaster, and of a long-term mobilization program.

The plans for continuity of operations under emergency conditions must include the selection and preparation of alternate locations in which employment security activities can be carried out if regular quarters are destroyed, the establishment of emergency chains of command, the arrangements for staffing, financing, and providing supplies, equipment, and communications facilities where normal arrangements are disrupted because of attack and such other activities as are involved in the protection of lives and property and in arranging for the mobility of personnel to provide employment security services where they will be critically needed. In addition, training programs must be developed and carried out, so that employment security staff will be prepared at all times, not only for self-preservation, but also for their participation in an emergency organization and for the extraordinary tasks which they will need to perform in an emergency.

In order to meet the program responsibilities of the employment security system during such preemergency and postemergency situations, it will be necessary to develop new and modified methods in such areas as the determination of manpower requirements and resources, the recruitment, classification, allocation, and utilization of workers, and the provision of unemployment payments to workers awaiting referral to essential employment.

These plans must be flexible and adaptable for use in unpredictable situations The procedures must be completed, tested, and ready for automatic and instant

application. State agencies must develop and train their staffs in plans for estimating casualties and must adapt the techniques for this activity in terms of their own industrial patterns, labor-market-area characteristics and evacuation plans. They must also develop modified and streamlined labor-market reporting programs, to serve as the basis for directing and operating their emergency manpower activities. It will also be necessary to develop and test new concepts and methods for the accelerated recruitment, classification, and allocation of great masses of workers in disaster situations, for the maximum utilization of essential skills which may be in short supply and for the expansion of the labor force through the increased use of manpower sources not normally relied upon. Standby lists of essential employers must be compiled, so as to insure the realistic allocation of workers in short supply, and measures to curtail labor pirating and turnover must be planned for activitation in individual areas as they may be required. The employment security system must be prepared to meet unprecedented demands for unemployment benefits where workers lose their jobs as the direct or indirect result of the destruction of work places. This task may be infinitely complicated because enemy action can make current unemployment insurance procedures inoperative by destroying wage records upon which benefits are based, by disrupting communications with recordkeeping centers and by other destructive effects on employment security personnel, property and facilities. Therefore, emergency methods must be developed and tested for such processes as making determinations, paying benefits, collecting taxes and managing benefit funds, and draft legal authorizations, regulations and agreements must be developed to permit the installation, if necessary, of these emergency arrangements.

NONPERSONAL SERVICES COST

An increase of about $3½ million will be required for the nonpersonal service costs of the State employment security agencies. Of this amount $1,700,000 will be required for increases in the cost of rents of premises and $1,367,000 for contributions to State employees retirement funds. Retirement contributions are related to personal service costs. The balance of about $400,000 will be required for such items as supplies and rental of equipment where some increase will be needed because of higher workloads and prices. In addition, the increases will be necessary in such categories as payments to State civil service commission and merit systems and for workmen's compensation and unemployment insurance contributions which are related to the increases in the average number of employees estimated for 1959.

NEED FOR RESTORATION

Mr. GOODWIN. The reason given by the House committee for the cut was that with the additional volume of our claims work due to increased unemployment we could do the job in less time and, therefore, we didn't need the full amount.

We have carefully examined into the problem since we had our hearing with the House, and since they have made their report, and we are inclined to accept their conclusion in part. We think that it would be highly undesirable, however, to impose the full $24,300,000 cut. We think that we need $11,800,000 of it back in order to do a good job.

When I say a good job I mean a job that will avoid fraud and avoid erroneous payments. In this connection I have taken a look in the last few days at the experience we had back in fiscal years 1954 and 1955. In the year 1955 our fraud and overpayment rate went up by about 60 percent, and it was quite clear upon examination that a good part of it was due to the cuts that were made in administrative costs and the shortcuts that were taken.

Senator IVES. You found that generally in the country, did you?

Mr. GOODWIN. Yes, sir.

Senator IVES. I know that was true in New York State, but I can only judge by New York.

Mr. GOODWIN. Those figures reflect changes made in our administrative procedures with the cuts that were made in the previous year, when we had the economic downturn. Our workload went up very rapidly and our unit cost came down.

We feel that we are in exactly the same kind of situation now. We know from what has taken place in the last few months that a great many shortcuts have been taken by the States. They have had to.

Senator HILL. You mean under the impact of the increase in the load?

Mr. GOODWIN. That is right. We have done everything we can to help them get in a position where they can get on top of the problem, and they have done a good job, everything considered, but we don't think it is desirable to continue the conditions that we have had in the last few months.

UNCOMPENSATED STATE OVERTIME

There are also some other factors in here that are very important. One is that the State agencies have been working a lot of uncompensated overtime, and you cannot continue to ask people to do that beyond a certain period.

Senator HILL. Do they not get paid for this overtime in the States?

Mr. GOODWIN. A lot of it has been uncompensated. They have also been accumulating their annual leave. There are limits to how far you can go on that, too. In some of the situations we have had they have not been able to put on personnel because they did not have the space for them. In the last month or two they have gotten the space. This has been an absolute necessity. They just could not get these people indoors to take care of the workload. They have now gone out and rented additional space, which means they have been able to put additional people on the payroll. The States actually saved money in this 2- or 3-month period before staffing up. But it is not a sound situation to continue.

These are the reasons, gentlemen, why we feel, and feel very strongly, that it would be false economy to take this full $24,300,000 in savings, and we would urge this committee to give us a restoration of the $11,800,000.

Senator IVES. Mr. Chairman, may I interrupt there?

Senator HILL. Go right ahead, Senator.

UNEMPLOYMENT TAX COLLECTIONS AND ALLOCATIONS TO STATES

Senator IVES. I hold in my hand a table showing the Federal unemployment tax collections and the Federal fund allocated to the States, and the percentages based on that. I am just curious to know on what basis you figure out the amounts which would be returned to the States. Initially, this money all came from the States.

To be sure, it is a Federal tax in one sense of the word, but am I right in stating that this is three-tenths of 1 percent of the amount of employment?

Mr. GOODWIN. Yes, sir; of the payroll.

Senator IVES. That is right. That is uniform for the whole country; is it not?

Mr. GOODWIN. The tax is; yes, sir.

Senator IVES. That is what I mean.

Now we have this situation. Compare Michigan and New York. Do you have a table like this?

Mr. GOODWIN. I think I have the same one; yes, sir.

Senator HILL. The table will be inserted in the record at this point for the information of the committee and of the Senate.

(The table referred to follows:)

Estimated Federal unemployment tax receipts and Federal funds allocated to States for administration during fiscal year 1957; and excess tax collection distributed on July 1, 1957

[In thousands]

	Federal unemployment tax collection (1)	Federal funds for operating expenses of States (2)	Ratio of funds for operating expenses to tax collections (3)	1957 Reed Act excess tax collections distributed, July 1, 1957 (4)	Total Federal funds made available to States (col. 2 + col. 4) (5)	Ratio of funds available to tax collections (col. 5 ÷ col. 1) (6)
			Percent			
Total	$327,261	$251,978	77.0	$71.195	$323,173	98.8
Alabama	3,840	3,553	92.5	845	4,398	114.5
Alaska	406	957	235.7	98	1,055	259.9
Arizona	1,478	2,624	177.5	336	2,960	200.3
Arkansas	1,585	2,490	157.1	372	2,862	180.6
California	30,407	26,205	86.2	6,856	33,061	108.7
Colorado	2,515	2,145	85.3	538	2,683	106.7
Connecticut	6,422	3,748	58.4	1,395	5,143	80.1
Delaware	1,196	583	48.7	272	855	71.5
District of Columbia	1,727	1,851	107.2	383	2,234	129.4
Florida	5,607	4,555	81.2	1,231	5,786	103.2
Georgia	5,280	3,656	69.2	1,133	4,789	90.7
Hawaii	785	825	105.1	169	994	126.6
Idaho	797	1,393	174.8	186	1,579	198.1
Illinois	23,630	10,808	45.7	5,073	15,881	67.2
Indiana	9,755	4,566	46.8	2,076	6,642	68.1
Iowa	3,488	2,192	62.8	734	2,926	83.9
Kansas	3,015	2,053	68.1	625	2,678	88.8
Kentucky	3,602	2,987	82.9	769	3,756	104.3
Louisiana	4,335	3,104	71.6	924	4,028	92.9
Maine	1,564	1,304	83.4	336	1,640	104.9
Maryland	5,317	4,399	82.7	1,173	5,572	104.8
Massachusetts	11,785	10,053	85.3	2,597	12,650	107.3
Michigan	17,793	12,778	71.8	3,756	16,534	92.9
Minnesota	5,175	3,359	64.9	1,140	4,499	86.9
Mississippi	1,678	2,488	148.3	358	2,846	169.6
Missouri	7,713	4,492	58.2	1,656	6,148	79.7
Montana	869	1,258	144.8	211	1,469	169.0
Nebraska	1,654	1,176	71.1	355	1,531	92.6
Nevada	627	875	139.6	144	1,019	162.5
New Hampshire	1,155	1,024	88.7	241	1,265	109.5
New Jersey	13,349	10,559	79.1	2,859	13,418	100.5
New Mexico	1,032	1,487	144.1	237	1,724	167.1
New York	41,142	36,123	87.8	8,928	45,051	109.5
North Carolina	6,203	4,546	73.3	1,331	5,877	94.7
North Dakota	488	902	184.8	105	1,007	206.4
Ohio	22,372	10,231	45.7	4,792	15,023	67.2
Oklahoma	2,994	2,865	95.7	643	3,508	117.2
Oregon	3,375	3,199	94.8	771	3,970	117.6
Pennsylvania	24,756	19,874	80.3	5,486	25,360	102.4
Puerto Rico		980			980	
Rhode Island	1,956	2,008	102.7	446	2,454	125.5
South Carolina	2,825	2,786	98.6	601	3,387	119.9
South Dakota	521	666	127.8	110	776	148.9
Tennessee	5,075	3,787	74.6	1,069	4,856	95.7
Texas	13,692	9,975	72.9	2,944	12,919	94.4
Utah	1,197	1,880	157.1	281	2,161	180.5
Vermont	578	822	142.2	124	946	163.7
Virginia	4,998	2,353	47.1	1,073	3,426	68.5
Virgin Islands		47			47	
Washington	4,821	4,999	103.7	1,110	6,109	126.7
West Virginia	3,113	1,969	63.3	668	2,637	84.7
Wisconsin	7,120	3,514	49.4	1,529	5,043	70.8
Wyoming	454	713	157.0	106	819	180.4
Unobligated balance		2,160			2,160	
Veterans' Administration		32			32	

CRITERIA FOR STATE ALLOCATIONS

Senator IVES. I would like to ask this question: In the first place, what are your criteria for determining how much the State should get? I take it from what I learned this morning that you do this State by State, but that you have certain standard requirements that they all have to meet. Is that correct?

Mr. GOODWIN. The rules of the game for distributing the money are applied to all the States. Basically it is a workload budget taking into account the salary structure in the State. In other words, we take the prevailing salaries in the State and use them in the construction of the budget. Geography has quite a bit to do with this. Some States have their people in large urban centers, and the unit cost tends to be lower in those areas. The unit costs tend to be higher in the sparsely settled States, but the basic factors in the development of the budget are the workload and unit time for what is allowed to each State.

Senator IVES. That is uniform throughout the country in every State?

Mr. GOODWIN. Yes, sir.

ACTUAL ALLOCATIONS

Senator HILL. Earlier today, we had some discussion with reference to the allocations out of this appropriation account to the individual States. I wish you would supply for the record a table showing the actual allocations for fiscal years 1956 and 1957, the estimate for the current fiscal year, and the estimate for 1959.

(The table referred to follows:)

Budget allotments, fiscal years 1956, 1957, and estimates for fiscal years 1958 and 1959

	Fiscal year—			
	1956	1957	1958 estimate	1959 estimate
Total	[1] $251,914,585	[1] $251,978,397	[1 2] $295,227,117	[3] $316,800,000
Alabama	3,475,727	3,553,473	4,257,866	4,424,702
Alaska	893,624	956,588	1,172,774	1,218,727
Arizona	2,266,614	2,623,792	3,264,965	3,392,897
Arkansas	2,214,995	2,489,563	2,969,730	3,086,093
California	24,366,056	26,204,962	31,401,087	32,631,479
Colorado	1,907,498	2,145,234	2,746,305	2,853,914
Connecticut	3,570,213	3,748,134	4,505,124	4,681,649
Delaware	502,948	583,265	701,071	728,541
District of Columbia	1,909,998	1,850,734	2,053,717	2,134,188
Florida	4,214,903	4,555,280	5,453,889	5,667,589
Georgia	3,404,768	3,656,408	4,363,842	4,534,831
Guam	----------	----------	30,000	35,000
Hawaii	733,557	824,478	967,463	1,005,371
Idaho	1,216,143	1,393,436	1,620,968	1,684,483
Illinois	10,383,008	10,808,466	13,273,977	13,794,093
Indiana	4,412,210	4,565,540	5,230,901	5,435,864
Iowa	1,906,854	2,191,685	2,506,908	2,605,136
Kansas	1,833,159	2,053,340	2,436,663	2,532,139
Kentucky	2,749,082	2,987,161	3,383,742	3,516,328
Louisiana	2,968,591	3,103,622	3,663,156	3,806,690
Maine	1,305,294	1,303,820	1,497,991	1,556,687
Maryland	3,700,834	4,399,363	4,781,245	4,968,589
Massachusetts	9,314,741	10,053,053	10,901,849	11,329,017
Michigan	11,583,123	12,778,195	14,562,793	15,133,408
Minnesota	3,298,943	3,358,580	4,223,970	4,389,478
Mississippi	2,345,314	2,487,563	3,073,236	3,193,655
Missouri	4,074,819	4,491,972	5,066,952	5,265,491
Montana	1,184,011	1,257,614	1,509,890	1,569,052
Nebraska	1,130,906	1,175,877	1,371,845	1,425,598
Nevada	761,164	875,459	1,090,206	1,132,924
New Hampshire	1,097,543	1,024,160	1,263,571	1,313,082
New Jersey	10,271,653	10,558,805	11,871,487	12,336,649
New Mexico	1,328,776	1,486,858	1,747,925	1,816,414
New York	33,053,837	36,122,487	42,447,115	44,110,325
North Carolina	4,375,470	4,545,852	5,619,869	5,840,073
North Dakota	782,647	902,076	1,031,545	1,071,964
Ohio	10,039,841	10,231,259	12,775,862	13,276,460
Oklahoma	2,676,974	2,864,987	3,687,711	3,832,207
Oregon	2,965,927	3,199,451	3,958,432	4,113,536
Pennsylvania	18,541,875	19,874,080	22,620,461	23,506,801
Puerto Rico	885,336	979,905	1,193,910	1,240,691
Rhode Island	2,081,073	2,007,910	2,610,260	2,712,538
South Carolina	2,641,245	2,786,233	3,444,850	3,579,830
South Dakota	587,589	666,306	786,088	816,889
Tennessee	3,460,241	3,786,696	4,461,010	4,635,806
Texas	9,544,773	9,974,556	12,009,372	12,479,937
Utah	1,649,457	1,880,201	2,190,288	2,276,110
Vermont	764,059	822,155	1,001,842	1,041,097
Virginia	2,191,551	2,352,973	2,817,771	2,928,180
Virgin Islands	39,331	47,371	72,366	75,202
Washington	4,723,270	4,998,933	5,945,531	6,178,495
West Virginia	1,845,980	1,969,181	2,309,608	2,400,106
Wisconsin	3,300,845	3,514,180	4,378,334	4,549,891
Wyoming	671,652	712,597	862,484	896,279
States total	(233,150,043)	(249,785,869)	(295,191,817)	(306,762,175)
Contingency	----------	----------	----------	10,000,000
Railroad Retirement Board	202	210	300	325
Veterans' Administration	24,674	32,087	35,000	37,500
Subtotal	(233,174,919)	(249,818,166)	----------	(316,800,000)
Unallotted balance	[4] 18,739,666	[5] 2,160,231	----------	----------
Total	251,914,585	251,978,397	295,227,117	316,800,000

[1] Includes reallotments of unencumbered funds in State agencies from prior year: 1956, $1,914,585; 1957, $1,909,734; 1958, $2,413,117. Includes reimbursements of $68,663 in fiscal year 1957. Postage prorated.

[2] Includes the $33,000,000 supplemental appropriation prorated on a percentage basis of each State's allocation to total allocation.

[3] Estimated on the basis of each State's fiscal year 1958 percentage to the total allocation for fiscal year 1958 including the $33,000,000 supplemental appropriation. The total, $316,800,000, represents the House allowance, $305,000,000, plus the restoration requested of the Senate, $11,800,000.

[4] Includes $18,670,934 contingency funds and $68,732 unobligated funds.

[5] Includes $2,000,000 contingency funds and $160,231 unobligated funds.

SPECIFIC ALLOCATIONS CITED

Senator IVES. Let's come to this next question.

If you look at Michigan, the unemployment tax collections there were $17,793,000, and the amount allocated to Michigan was $12,778,000. Is that right?

Mr. GOODWIN. Yes, sir.

Senator IVES. In other words, the amount allocated for operating expenses was 71.8 percent of the tax collections. Is that correct?

Mr. GOODWIN. Yes, sir.

Senator IVES. Take New York. The amount of tax collections was $14,142,000, and the amount allocated was $36,123,000. New York got back 87.8 percent. Why is it different? Why is not Michigan entitled to as big a percentage as New York is?

I am not out here battling for Michigan, but I do not understand the variations.

SALARY DIFFERENTIAL

Mr. KEENAN. The point Mr. Goodwin made is a most valid one—a difference in the State salaries. In some States the average salary may be $1,000 or $1,500 higher than in another State.

When you allocate the funds you are allocating them based on the average salary in that State. Also in some States, for example New York, they cover employers of less than four workers under their law. They cover more workers. That is an option in the State. In other States the coverage was eight or more until the Federal law was amended. Then the States have had to cover employers of four or more workers. On the other hand, there are some States in the country that, on their own volition, have cut coverage to one or more. That not only brings in many more employers, but it makes thousands more of employees eligible for benefits. So your administrative costs are affected by coverage, by your State salaries in the State, depending on whether it is a high State or a low State, and there is considerable variation in that.

It is also influenced by other factors in the State. Some States have higher rentals than other States. For example, if you will look on this table you will notice that, by and large, the smaller States are getting the heaviest percentage back.

Senator IVES. Yes, sir.

Mr. KEENAN. They tend to be large in area. The problem of administration is complicated because there are not so many large centers. Their payroll tax tends to be proportionately low in some of those smaller States. So they tend to get back a higher percentage of the payroll tax than some of the larger States.

We made a study of this several years ago in considerable detail, and reported to the House committee, and I don't recall all of the factors, but there are others similar to the one I mentioned, and Mr. Goodwin mentioned, that account for this variation.

Senator IVES. There is another question I would like to ask.

Senator HILL. Before he leaves that question, Senator, excuse me.

Could you supply this committee with a copy of that report of your study so we might have that?

Mr. KEENAN. Yes, sir.

Mr. GOODWIN. It is several years old.

Senator HILL. I realize that, but would not the factors be about the same?

Mr. KEENAN. It is quite lengthy.

(The material referred to has been filed with the committee. The report titled "Study of Administrative Costs of Changes in State Employment Security Laws, Fiscal Years 1948–52" was prepared by a special study group of which Dr. F. F. Fauri, dean of the School of Social Work of the University of Michigan, served as director, was printed in the House hearings of 1953 on H. R. 5246, making appropriations for the Department of Labor for fiscal year 1954, beginning on page 152 thereof.)

WORK WITH STATE COMMITTEES

Mr. GOODWIN. I would like to add one thing on this point that Mr. Keenan has mentioned, and that is that we work continuously with a committee of the States on this. It is a committee of the Interstate Conference of Employment Security Agencies. They have a grants committee, and we have a standing offer with them or any of the States if they can give us a more equitable way to handle fund allocations we are ready to accept it, and I think it is fair to say that that committee has been satisfied over the years that the money has been distributed on an equitable basis, all things considered.

Senator IVES. Mr. Chairman, may I ask a question there?

Senator HILL. Certainly.

DIFFERENTIAL DUE TO NUMBER OF EMPLOYEES COVERED

Senator IVES. I found two other States here that I would say are fairly comparable, Connecticut and Massachusetts. I would assume their employment conditions are very similar in those two States, and I would assume the salary levels are more or less similar. Connecticut, when it comes to the ratio of funds allocated to tax collections in 1957, got 58.4 percent while in that same period of time Massachusetts got 85.3 percent.

What is the cause of that differential?

Mr. GOODWIN. I really don't know.

Senator IVES. They are two States that are quite comparable.

Mr. GOODWIN. I really don't know without checking.

Mr. KEENAN. Massachusetts covers employers of one or more employees. Connecticut covers employers of three or more.

Senator IVES. That is what I want to know. Then every one of these variations has an answer, has it not, in that particular respect?

Mr. GOODWIN. I think we can give you a reasonable explanation on any variation you come up with.

Senator HILL. In other words, there is some factor that varies, and therefore that factor causes a variance in the answer.

Mr. GOODWIN. That is right.

Senator IVES. Thank you very much.

Senator HILL. All right, Mr. Goodwin.

REQUEST FOR RESTORATION OF FUNDS FOR NONPERSONAL SERVICES

Mr. GOODWIN. I wanted to talk about the nonpersonal services for a few minutes, if I may.

We are requesting restoration of $2,786,000 for nonpersonal services. We have requested $67,052,000 for nonpersonal services, including

postage for 1959. In the first half of 1958, when insured unemployment averaged 1,400,000 per week, the expenditures were at a rate of $62 million per year, and an annual rate of $63,300,000 has been provided for in the last half of the year. We need the full amount of this request. The increase over 1958 is primarily for employee-retirement contributions which are mandatory, and to provide $1,700,000 for rental of additional space so that we can meet the increased workloads from workers coming into the offices.

There is one more item on the State grants I would like to mention very briefly. We are asking for restoration of $1,287,000, which is the money needed by State agencies for developing plans and standby facilities to assure continuity of the employment security program under emergency conditions. This is the work the States do for the Office of Civilian Defense and ODM. The entire item was cut out in the House.

Senator HILL. You say in the House. You mean by the House committee or by the House?

Mr. GOODWIN. It was knocked out by the committee and sustained on the floor.

REASON FOR HOUSE CUT

Senator IVES. What reason did they give?

Mr. GOODWIN. The House committee said that this appropriation if needed should be obtained by the Office of Civilian Defense in a unified request and then distributed to the agencies if they needed it. I believe that is the principal point that they made.

Senator IVES. What is your answer to that?

Mr. GOODWIN. My answer is we were told by the Bureau of the Budget to submit it this way, and if it is knocked out here, then we won't get it from any other source. In other words, if it is knocked out now, it is out; I suppose we can go back on supplemental.

EXCERPT FROM 1956 HOUSE REPORT

Senator HILL. In the House report they quote an excerpt from the committee's report on the bill for fiscal year 1956. That would be 3 years ago. That excerpt in the report for fiscal 1956 was as follows, and I quote:

> The committee has disapproved all requests from both departments, for civil defense and defense mobilization activities. It is the committee's firm belief that the scattering of the basic program authorities through the executive branch and the piecemeal consideration of appropriations for these activities by the legislative branch can result only in confusion and waste of public funds. It would appear that the only businesslike way to handle this matter would be for the central agency, charged with the primary responsibility, to prepare and present to the Congress a total integrated program.

That was the quote from 1956, and the committee added this year:

> The committee has not changed its mind. All such requests have been denied and the committee will look with extreme disfavor on the diversion, for these purposes, of any funds in the bill.

Senator IVES. Mr. Chairman, may I ask a question there?

Senator HILL. Yes, sir.

Senator IVES. I take it within the past the Senate has included appropriations of this type that the House had knocked out in diversion of the bill that we have had. Is that correct?

Mr. KEENAN. For the Federal Bureau I think there has been some small amounts, but not for State grants.

Senator IVES. I see.

Senator HILL. Not anything of this size. Isn't that right?

Mr. KEENAN. That is correct.

Mr. GOODWIN. I think that is right; yes; as far as our program is concerned.

SALARIES AND EXPENSES

On the salaries and expenses for the Bureau of Employment Security, I just want to say a few words in relation to that.

Senator HILL. We will insert in the record at this point the tables and other material in connection with this item, including the prepared statements of Mr. Goodwin and of Mr. Omohundro, Chief of the Veterans Employment Service.

(The material referred to follows:)

[APPROPRIATION ESTIMATE]

"BUREAU OF EMPLOYMENT SECURITY

"SALARIES AND EXPENSES

"[Salaries and expenses:] For expenses necessary for the general administration of the employment service and unemployment compensation programs, including temporary employment of persons, without regard to the civil-service laws, for the farm placement migratory labor program; and not to exceed $10,000 for services as authorized by section 15 of the Act of August 2, 1946 (5 U. S. C. 55a); [$5,958,000] *$6,300,000,* of which [$5,832,400] *$6,174,400* shall be derived by transfer from the Federal unemployment account in the unemployment trust fund, and, of which [$1,125,000] *$1,145,800* shall be for carrying into effect the provisions of title IV (except section 602) of the Servicemen's Readjustment Act of 1944."

Amounts available for obligation

1958 actual appropriation	$125, 600
Transfers to and from: Transfer from the Federal unemployment account in the unemployment trust fund	5, 832, 400
Total funds available	5, 958, 000
1959 budget estimate	125, 600
1959 transfers or authorizations estimated	6, 174, 400
Total 1959 funds estimated	6, 300, 000
Change requested for 1959	+342, 000
House allowance for 1959	6, 219, 000
House change over revised base 1958	+261, 000

Obligations by activities

	Revised base, 1958		Budget estimate, 1959		House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Veteran's placement	140	$1, 125, 000	141	$1, 145, 800	141	$1, 145, 800
2. Farm-placement service	25	206, 900	25	207, 600	25	207, 600
3. Collection and interpretation of labor-market information	90	660, 200	96	699, 500	90	661, 500
4. Assistance in maintaining public employment services	105	793, 700	117	875, 500	117	875, 500
5. Unemployment insurance service	100	766, 600	106	804, 700	106	804, 700
6. Field guidance, financing and auditing of State operations	214	1, 900, 200	239	2, 060, 400	232	2, 017, 400
7. Executive direction and management	20	191, 300	20	191, 700	20	191, 700
8. Central administrative services	59	314, 100	59	314, 800	59	314, 800
Total	753	5, 958, 000	803	6, 300, 000	790	6, 219, 000

Obligations by objects

	Revised base, 1958	Budget estimate, 1959	House allowance
Summary of personal services:			
Total number of permanent positions	753	803	790
Full-time equivalent of all other positions	1	1	1
Average number of all employees	733	781	769
Direct obligations:			
Personal services	$4, 879, 900	$5, 157, 200	$5, 087, 700
Travel	372, 800	402, 200	396, 700
Transportation of things	9, 700	9, 700	9, 700
Communication services	83, 400	86, 000	85, 400
Rents and utility services	900	900	900
Printing and reproduction	82, 600	82, 600	82, 600
Other contractual services	152, 400	153, 300	153, 100
Services performed by other agencies	53, 900	53, 900	53, 900
Supplies and materials	18, 100	20, 600	19, 900
Equipment	3, 200	3, 200	3, 200
Grants, subsidies and contributions	299, 300	328, 600	324, 100
Taxes and assessments	1, 800	1, 800	1, 800
Total	5, 958, 000	6, 300, 000	6, 219, 000

Summary of new positions

Organizational unit	Grade	Number	Gross cost
Improving employment services in smaller communities of unemployment and underemployment:			
Employment Service:			
Employment-service adviser	GS-13	1	$8,990
Do	GS-12	4	30,280
Do	GS-11	1	6,390
Employment service analyst	GS-11	1	6,390
Occupational analyst	GS-11	2	12,780
Clerk-stenographer	GS-4	3	10,245
Total		12	75,075
Improving unemployment insurance functions in State agencies:			
Unemployment Insurance Service:			
Organization and methods examiner	GS-12	1	7,570
Do	GS-11	1	6,390
Social-insurance adviser	GS-11	1	6,390
Organization and methods examiner	GS-9	1	5,440
Social-insurance adviser	GS-9	1	5,440
Clerk-stenographer	GS-4	1	3,415
Total		6	34,645
Extending management audits in State agencies:			
Office of Budget and Management:			
Senior auditor	GS-11	1	6,390
Auditor	GS-9	2	10,880
Total		3	17,270
Determining emergency manpower requirements and resources:			
Office of Program Review and Analysis:			
Field analyst	GS-12	2	15,140
Labor market analyst	GS-11	2	12,780
Statistical clerk	GS-5	1	3,670
Secretary (stenography)	GS-4	1	3,415
Total		6	35,005
Strengthening regional office staff to work with State agencies:			
Regional offices:			
Employment security representative	GS-12	11	83,270
Clerk-stenographer	GS-4	11	37,565
Total		22	120,835
Assistant veteran employment representative for Michigan:			
Veterans' Employment Service, Field: Veterans' employment representative.	GS-12	1	7,570
Total permanent		50	290,400
Deduct lapses		4	23,100
Total personal services		46	267,300

Summary of changes

	Positions	Amount
1958 actual appropriation	15	$125,600
Transfers to and from: Transfer from the Federal unemployment account in the unemployment trust fund	738	5,832,400
Total funds available	753	5,958,000
1959 budget estimate	15	125,600
1959 transfers or authorizations requested	788	6,174,400
Total requested for 1959	803	6,300,000
Change requested for 1959	+50	+342,000

Summary of changes—Continued

	Budget estimate, 1959		House allowance	
	Positions	Amount	Positions	Amount
INCREASES				
For mandatory items: Retirement contribution annualization rate of 6.5 percent in 1959 and 6.25 percent in 1958	----------	$12,000	----------	$12,000
For program items:				
Provide for employment counseling, job placement, and community development programs in smaller areas of unemployment and underemployment	12	80,000	12	80,000
Provide for tightening controls over tax collecting and accounting, more thorough examination of questionable claims, and streamlining payment of claims which present no problem of eligibility	6	36,500	6	36,500
Provide for audit of State agency expenditures and for assistance to State agencies in establishing and maintaining appropriate management policies and fiscal controls	3	27,000	3	27,000
Provide for determining manpower requirements and resources during emergencies	6	38,000	----------	----------
Provide for strengthening regional office staff to streamline unemployment insurance benefit payments, locate and identify scientific and engineering skills, and assure continuity of the Federal-State employment-security program under emergency conditions	22	130,000	15	87,000
Provide for 1 additional assistant veterans' employment representative for Michigan and for a decrease in rate of lapse for veterans' placement positions	1	18,500	1	18,500
Subtotal	50	330,000	37	249,000
Total increase	50	342,000	37	261,000
Net change	+50	+342,000	+37	+261,000

EFFECT OF HOUSE ACTION

Activity 1. Veterans placement service.—The House allowed the requested amount of $1,145,800. This includes an increase of 1 position and $8,500 for an additional assistant veterans employment representative in Michigan; $10,000 for a reduction in the rate of lapse; and $2,300 for mandatory contribution to the retirement fund.

Activity 2. Farm placement service.—The House allowed the requested amount of $207,600. The only increase is $700 for mandatory contribution to the retirement fund.

Activity 3. Collection and interpretation of labor market information.—The House allowed $661,500, a reduction of $38,000 from the request. The amount allowed excludes a requested increase of 6 positions and $38,000 to assist the State agencies in determining emergency and postemergency manpower requirements and resources and to develop a program for testing the manpower feasibility of proposed production goals in terms of impact upon specific labor market areas. The only increase allowed is $1,300 for mandatory contribution to the retirement fund.

Activity 4. Assistance in maintaining public employment services.—The House allowed the requested amount of $875,500. This includes an increase of 12 positions and $80,000 to improve employment counseling and job placement service and to extend community employment development assistance to the smaller areas of unemployment and underemployment. It also includes an increase of $1,800 for mandatory contribution to the retirement fund.

Activity 5. Unemployment insurance service.—The House allowed the requested amount of $804,700. This includes an increase of 6 positions and $36,500 for increased assistance to the State agencies in (*a*) tightening controls of tax collecting and accounting, (*b*) more thorough examination of questionable claims, and (*c*) streamlining payment of claims which present no problem of eligibility. It also includes an increase of $1,600 for mandatory contribution to the retirement fund.

Activity 6. Field guidance, financing, and auditing of State operations.—The House allowed $2,017,400, a reduction of $43,000 from the request. The amount allowed excludes a requested increase of 7 positions and $43,000 to assist the State agencies in developing plans and procedures to assure continuity of the Federal-State employment security program under emergency conditions. It includes increases of 15 positions and $87,000 to strengthen regional office staffs for work with the State agencies on streamlining unemployment benefit payments and devising methods of locating and identifying scientific and engineering skills; 3 positions and $27,000 for the auditing of State agency expenditures and increased assistance to the State agencies in establishing and maintaining appropriate management policies and fiscal controls; and $3,200 for mandatory contribution to the retirement fund.

Activity 7. Executive direction and management.—The House allowed the requested amount of $191,700. The only increase is $400 for mandatory contribution to the retirement fund.

Activity 8. Central administrative services.—The House allowed the requested amount of $314,800. The only increase is $700 for mandatory contribution to the retirement fund.

STATEMENT OF ROBERT C. GOODWIN, DIRECTOR, BUREAU OF EMPLOYMENT SECURITY, ON THE 1959 SALARIES AND EXPENSES APPROPRIATION REQUEST

Mr. Chairman, for salaries and expenses of the Bureau we are requesting $6,300,000 for 1959. Of this amount, $125,600 is to be appropriated from the general funds of the Treasury and $6,174,400 is to be derived by transfer from the Federal unemployment account in the unemployment trust fund. This continues the method of financing initiated by the Congress for the 1958 appropriation. The increase of $342,000 over 1958 will allow for 50 more positions than the 753 in our 1958 staffing pattern.

The employment security system must be sensitive to the needs arising from changes in the labor market which is almost constantly in a state of flux. We have tried to meet the problems of rising unemployment, as well as longer range changes in the labor market situation, through changes in emphasis in our operating programs. Technological advances and new challenges in science, engineering, and production have created an imperative need to develop skills of our working people and to fully utilize our manpower resources. We have attempted to keep the employment security system both sensitive to the changing needs for service and flexible enough to meet them as they develop. I would like to describe some of the changes which are being proposed so that the Bureau can more adequately serve the needs of workers and employers during the period of readjustment.

UNEMPLOYMENT INSURANCE

We are requesting 6 additional positions and $36,500 for the Bureau's unemployment insurance responsibilities. These positions will be used in working with the State agencies in improving efficiency in claims processing, benefit payments, and tax-collection operations.

The volume of claims and benefits to be paid in 1958 and 1959 is expected to be substantially larger than it has been in recent years. In this kind of a situation it is necessary to increase precautions against improper payments made either as a result of error or misrepresentation. Such overpayments are likely to undermine the integrity and effectiveness of the program. In addition, steps must be taken to assure that benefit payments will be paid promptly. Unless payments are made promptly the system fails to serve its purpose of replacing wage loss quickly enough for the worker to use the payment for the necessities of life. We have sent to all States general recommendations for meeting this problem as it has developed in 1958. However, it is also necessary to work cooperatively with the States in reviewing the adequacy of methods and procedures now in use and in developing new and improved methods to assure the prompt payment of benefits. Sharp increases are also occuring in the unemployment compensation for veterans and for Federal employees programs. Benefit payments and administrative costs of these programs are paid by the States from Federal funds under an agreement with the Secretary of Labor.

In 1959 it is estimated that about $1,550 million in taxes will be collected and $2,500 million in benefits will be paid out through the employment security system in all the States and Territories. It is estimated that 2,200,000 employers will be subject to the State unemployment insurance laws.

The State employment security agencies will be required to process 9 million tax returns. In addition, it will be necessary to calculate individual tax rates for more than 1.2 million employers. At present our work with the States in this area is inadequate. Therefore, we propose to initiate an expanded program of working with the States to review their accounting methods, internal controls, collection procedures and experience rating operations to see that the procedures and methods used are sound.

EMPLOYMENT SERVICE

We are requesting an increase of 12 positions and $80,000 to expand employment service activities in smaller areas to stimulate and supplement local action to alleviate and prevent unemployment and underemployment. The activities to be expanded are placement, counseling, occupational analysis, labor-market information and community planning. It is intended to key these expanded services in with local employment development programs where they exist. Our intent is to make the local offices effective participants in community development organizations in these smaller areas of unemployment and underemployment.

We will develop practical methods for determining the skills, abilities, and vocational training potentialities of the unemployed and underemployed workers in these areas. Such information will be compiled in local inventories of available skills and will enable the local employment security offices to place these workers in existing or new jobs in the community or where necessary in jobs outside of the local area.

We propose to develop tables of related skills of the unemployed and underemployed workers, for use in potential new employment or for development through training, and to identify industries that can use the types of skills available in areas of unemployment and underemployment. We will also develop occupational staffing schedules for the size establishments in industries likely to locate in the smaller areas.

Detailed data on skills and training potential represented in the community labor supply are not only necessary for determining additional jobs the workers can perform, but also are of major importance to community development organizations in planning and carrying out local programs to build and diversify their economies.

Bureau staff will work with State employment security agencies, particularly in States in which there are a number of areas affected by declining employment in certain manufacturing and mining activities and by changes in the agricultural economy. These employees will provide on-the-spot guidance and assistance in the development of State and local programs to increase job opportunities and to improve the utilization of manpower resources.

We are requesting in the State grants budget 150 man-years for the purpose of extending regular employment service facilities to the smaller communities having these problems. At the present time, the State agencies are not able to give adequate service to many of those areas.

EMERGENCY MANPOWER REQUIREMENTS AND RESOURCES

To enable the Bureau to carry out its responsibilities in an emergency period, we are requesting 6 additional positions and $38,000 for the national office.

In the event of an emergency or national disaster the employment security system will be called upon immediately as the sole organized manpower agency in the Nation. Not only will we have to locate qualified workers to perform needed tasks and be a centralized hiring channel, but authorities will rely upon the system to provide current facts as to available supplies of workers and the volume and nature of employment demands.

To place ourselves in a condition of readiness to perform these functions, should they be needed, requires the assemblying in secure locations of the key manpower information upon which quick emergency decisions must depend. This is a large and involved task which we have already begun on an experimental basis. Most of the work will be performed in the State agencies, and our grants budget contains a request for funds to finance this activity. The Bureau will provide technical assistance to the States on the kinds of data that must be assembled in advance, the types of analyses that will provide the most useful information and the best procedures to follow in meeting the demands that will be placed upon the system. It will also be necessary to develop a workable system of evaluating the adequacy of manpower supply and skills to meet production goals assigned to plants in specific labor market areas throughout the country.

REGIONAL OPERATIONS

We are requesting an increase of 1 professional and 1 clerical position in each of our regional offices at a cost of $130,000. These positions will be used to work with the State agencies in (1) identifying individuals who have the potential for skilled and technical occupations, (2) improving unemployment insurance tax and claims operations to meet current conditions and (3) preparing to carry out Bureau and State agency responsibilities in an emergency.

The shortage of skilled workers in technical and scientific fields has become a matter of national concern. It is becoming increasingly important that we recognize people who have skills which can be readily transferred from one type of work to another or that can be quickly converted to more essential employment. The local employment security offices, having available a great amount of occupational data, are in a position to do this job. In addition, the occupational testing and counseling services of the local offices can be directed to the task of locating and identifying persons with aptitudes for technical and scientific training. In 1959 the regional office staff will work closely with the State agencies in giving emphasis to this work.

The regional staffs will also work with the State agencies in their unemployment insurance programs, placing special emphasis on improving tax collection and accounting, extending internal audits, improving methods of examining questionable claims for benefits, and generally streamlining procedures for prompt payment of claims. These measures assume greater urgency in view of the current trends of unemployment.

More intensive assistance must also be given to the State agencies in developing their plans and procedures for carrying out essential employment security functions in the event of an emergency. The Bureau and the employment security system must be prepared to carry out in the event of any emergency the essential manpower mobilization functions including recruitment, utilization, and training of manpower, as well as providing programs of income maintenance. This work involves also working out cooperative action in defense readiness and survival planning measures.

STATE AUDIT AND MANAGEMENT APPRAISAL

We are requesting an increase of 3 positions and $27,000 to expand the scope of our audits of State agency management and fiscal operations.

For a number of years the audit of the State agency expenditures was on a limited sample basis. In 1954 and 1955 several situations came to light in the State employment security agencies which made it advisable to extend the scope and content of the audits of the State agencies. The Congress agreed, and we are now examining State agency organization, management, and policy as a part of our audit program. The funds appropriated by the Congress in recent years have enabled us to make a start on this program. However, as we gain more experience in the program, it is apparent that additional work needs to be done. At the present time we are able to audit each State agency management only once in every 8 years. In addition, it is necessary to further expand the sample of items presently covered and to start auditing expenditures made by the State agencies under the Reed Act.

Chapter 657 of Public Law 567 (Reed Act) enacted August 5, 1954, provides that the excess of collections from the Federal unemployment tax over employment security administrative expenses shall be returned to the States. The law specifies the conditions and purposes for which these funds may be used. Funds were returned to the States under the Reed Act for the first time on July 1, 1956. In 1959 bureau staff will be required to initiate annual audits of State expenditures from these funds to assure conformity with the Federal law.

VETERANS' EMPLOYMENT SERVICE

For the Veterans' Employment Service we are requesting an increase of $20,800 for fiscal year 1959. The major portion of this amount is needed for adjusting lapses pertaining to personal services. The Service has for the past few years experienced a very low rate of turnover. Consequently, this year we are recommending this adjustment with Bureau of the Budget approval. In addition we are requesting that a position of assistant veterans' employment representative be added to the staff in Michigan in order to bring that operation into compliance with the Service's operating formula. The established staffing pattern for this

Service provides for 1 veterans' employment representative in each State having a veteran population of under 400,000; 1 veterans' employment representative and 1 assistant in each State having between 400,000 and 1 million veterans; and 1 veterans' employment representative and 2 assistants in those States having over 1 million veterans. Funds for the current year's operations permit this pattern to be maintained in all States except Michigan, which now has a veteran population of over 1 million, but which has only a veterans' employment representative and 1 assistant. An additional position is requested to bring the staff in Michigan up to the established pattern to provide comparable employment services to veterans in all States.

Mr. Omohundro is here today and I am sure the committee will be interested in hearing from him.

STATEMENT OF EDWARD L. OMOHUNDRO, CHIEF, VETERANS' EMPLOYMENT SERVICE, ON THE 1959 APPROPRIATIONS REQUEST FOR SALARIES AND EXPENSES, BUREAU OF EMPLOYMENT SECURITY

Mr. Chairman, it again becomes my distinct privilege to appear before this committee and give you a report on the operation of the Veterans' Employment Service during the past 12-month period. For 1959 we are requesting $1,145,800, an increase of $20,800 over our appropriation for 1958. The increase is due to changes Mr. Goodwin has spoken of—addition of one assistant veterans' employment representative for Michigan to bring our staffing in that State up to comparable strength of the other States. The established staffing pattern for the Veterans' Employment Service provides for 1 veterans' employment representative in each State having a veteran population of under 400,000; 1 veterans' employment representative and 1 assistant in each State having between 400,000 and 1 million veterans; and 1 veterans' employment representative and 2 assistants in each State having over 1 million veterans. Michigan now has a veteran population of over 1 million but has only a veterans' employment representative and 1 assistant. Hence, the necessity to add one position to the Michigan staff in order to bring it up to the established pattern. $8,500 is requested to meet the salary and travel expenses of this additional position. An increase of $10,000 is being requested to provide for a more realistic rate of lapse. We have had for the past 6 years a very low rate of turnover. We are requesting that lapse be adjusted to reflect this low rate of turnover. An additional $2,300 is being requested to provide retirement contributions for a full year.

Our experience last year has confirmed our decision that the primary responsibility of the State veterans' employment representatives should be functional supervision of the services provided veterans by the local employment service offices. During the last fiscal year State veterans' employment representatives evaluated 996 local employment service offices. From evaluation reports filed as a result of these visitations it is our firm conviction that constructive improvement has been made in the functioning of these offices in their programs of services to veteran applicants, especially disabled veterans.

Following up our operational program three 3-day regional training conferences for veterans' employment representatives have been scheduled for the third and fourth quarters of the current fiscal year. At these training conferences specific attention will be given to program planning, the Veterans' Employment Service evaluation program and improvement of our reporting procedures. We are asking representatives from the Veterans' Administration to meet with us at these conferences to examine and discuss thoroughly mutual programs but with special emphasis on the placement of hospital dischargees. Functioning of local office veterans' employment representatives, the relationship of the veterans' program to the program of special applicant groups and particular problems relating to training of State agency personnel on services to veterans complete the proposed agenda for the scheduled regional training conferences.

State agency training personnel cooperated with State veterans' employment representatives and found the refresher training unit made available to them last fiscal year to be of constructive value. With the visual aids provided, the majority of States have engaged in actual on-the-job local office training with what we feel to be desirable results. A training unit to be used for instruction of local office veterans' employment representatives has been prepared in draft form. A trial run has been scheduled in the State of Florida. Based upon our experience in Florida the entire unit will be reviewed carefully by representatives of the veterans' affairs committee of the Interstate Conference of Employment Security Agencies and by a committee composed of representatives of organized veteran groups.

With benefit of recommendation coming from these groups a final revision will be contemplated with full participation by Bureau technical staff and my own headquarters staff with final publication scheduled for June of this year. The complete local office veterans' employment representative training unit will include an instructor's guide, a trainee workbook and suggested visual aids. Quite some interest is being manifested by administrators and training staffs of the State agencies in this project.

The reaction of State veterans' employment representatives, staffs of the State agencies, and State administrators to our revised program has been good. During the entire fiscal year veterans' employment representatives have been visiting local offices of the State agencies utilizing the evaluation and programing tools provided in the VER handbook. We feel that the results have been excellent. Members of my staff and I have continued followup visits to each of the veterans' employment representatives for evaluation and supervisory purposes. Thirty-eight States have been visited during the first 6 months of this fiscal year. We received commendatory reactions during the national meeting of the Interstate Conference of Employment Security Agencies held on September 4, 1957. Of particular interest to me in this respect was the universally favorable expressions received from veterans' organization representatives at their national conventions held during the summer months.

In addition to the basic services available to all applicants, i. e., registration, counseling, testing, referral, and placement, the local offices provide a number of services which are designed to better the veterans' position in the labor market, insure that he is aware of all veterans' rights and benefits which are related to employment and strengthen the possibility of his obtaining employment at his maximum skill. Each local State employment office has a veterans' employment representative who is trained to provide these additional services and to make sure that other local office personnel are also able to provide them. These special services include:

1. Screen veteran applicants to determine whether they have reemployment rights.
2. Advise potential eligible veterans of their rights to education and training under Government-sponsored programs and upon request assist them to find suitable on-the-job training opportunities.
3. Assist disabled veterans to obtain rehabilitation services from the Veterans' Administration or State departments of vocational rehabilitation.
4. Provide special placement services to Veterans' Administration hospital patients who have been out of the labor market for extended periods.
5. Provide preferential treatment in local office service to all disabled veterans.
6. Provide priority in job referral to qualified veterans and disabled veterans.

The State veterans employment representatives recognize that local office services to veterans will be only as good as the services available to the general public. Consequently, the major responsibility of the State veterans employment representative will be to continue to assist State agency staffs in developing procedures, training local office personnel and local office veterans employment representatives, and evaluating local office services to improve the quality and increase the coverage of State employment service operation to veterans. The State veterans employment representative will continue to assume primary responsibility for developing relationships with other agencies such as the Veterans' Administration, Civil Service Commission, Armed Forces separation points, local committees on employment of the physically handicapped, Bureau of Veterans' Reemployment Rights, civil service groups, and veterans' organizations.

State veterans employment representatives are continuing efforts to obtain the assistance of veteran organizations in the development of specific employment programs for veterans in cooperation with the State agencies. I appeared before each of the administrative councils and executive committees of the American Legion, American Veterans of World War II, Disabled American Veterans, and Veterans of Foreign Wars to give a full report on our operation as well as general labor market information. At their national conventions each of these organizations pledged increased effort in their respective employment programs. Resolutions supporting the programs of the Labor Department and the Bureau of Employment Security and its Veterans Employment Service were passed at these national conventions. We continue to feel that it is important to conduct a program that will likewise continue to merit support from the veterans groups because when we do that kind of a job we are accomplishing the task that you have given us.

Additional time and effort must be devoted to our cooperative program with the Veterans' Administration hospitals in finding suitable employment opportunities for long time hospital patients. The State veterans employment representatives serve in a liaison capacity between the local employment offices and the Veterans' Administration hospitals. They provide leadership in developing procedures and cooperative working relationships to insure maximum job finding assistance for veterans who have been rehabilitated and are ready for release from VA hospitals.

Our program of operations as set forth in the narrative description of our appropriations request is being carried forward vigorously. To enable us to do the job that we are set up to do, and that which we wish to do, we respectfully request this committee to approve our 1959 budget request for $1,145,800.

AMOUNT REQUESTED

Mr. GOODWIN. We had requested $6,300,000 which was an increase of $342,000 over what we had in 1958. The House approved $6,219,000, which is an increase of 37 positions and $261,000 over 1958, and a decrease of $81,000 from the request.

We are not appealing that amount at this time. The Bureau has been literally swamped since the development of this increased unemployment. We have operations within the Bureau that have increased threefold, including our request for information about unemployment by local areas. I got a little tabulation of that just yesterday, and in the first 2 months of this year we have had 3 times as many requests as we had in the similar period last year, so that we have had to put in a great deal of uncompensated overtime, and we are still not doing as good a job as we should, and letting important things go that should be done.

PRESENT BACKLOG OF WORK

Senator THYE. Mr. Chairman, I would like to ask Mr. Goodwin right at that point what is your backlog and how many weeks are you in arrears on your adjudication of applications?

Mr. GOODWIN. We don't handle those, you understand, in the Federal end of it.

Senator THYE. You say you have a load. So you must have a load somewhere.

Mr. GOODWIN. I am talking about such things as congressional requests for information, and assistance to the States in the development of their programs, and our mail from the public, our estimates of unemployment by area. These area estimates we make every 2 months. These are the type of thing that go to make up the workload of the Federal bureau, and we are behind. I don't have a figure at the moment as to just how far we are behind on each one of these items, Senator Thye, but we are behind.

Senator THYE. You are not behind in the allocation of the funds to the States.

Mr. GOODWIN. No, sir.

Senator THYE. So the State is not waiting on you for such action.

Mr. GOODWIN. Of the money, no.

Senator THYE. You are behind in your correspondence and replies to any inquiries that may come from the States as to the information concerning the program or a question that might come from, we will say, the congressional delegation for information?

Mr. GOODWIN. Yes, sir. We did not develop detailed data on this problem today because we were not appealing the $81,000 cut by the House. We felt that it was sounder for us to evaluate it and, inasmuch as we have concluded that it will be necessary to come back in on a supplemental for the State grant, we thought we would prefer to present our picture at that time for your consideration; so we did not develop the detailed information today.

I am merely now offering a general explanation as to what our picture is, and an explanation of why we are not giving more detailed data at this time.

Senator THYE. Then, Mr. Chairman, one further question.

How do the States handle their increased load?

Mr. GOODWIN. The Congress approved, Senator Thye, a $33 million supplemental. We got that money a month or so ago.

Senator THYE. Yes, I was aware of that. But that is what they may use in order to increase their staff to expedite the application load that may be coming in.

Mr. GOODWIN. Yes, sir; that is right.

QUESTION OF NEED FOR ADDITIONAL PERSONNEL

Senator THYE. I cannot get quite clear in my thinking your need of an increase in personnel, because you were not handling it out in the States. You have referred here to an increase of 37 positions in your own statement here on page 2 and you said you were not appealing that.

Mr. GOODWIN. That is right, at this time.

Senator THYE. However, if it were the State that handled it, I was trying to determine where did the load come back and fall upon you because of the increased unemployment.

Mr. GOODWIN. The load in making payments does not fall on us. That is entirely done by the State.

Mr. KEENAN. The requests for assistance from the State agencies to help in the elimination of bottleneck situations and that type of thing does fall on us.

Senator THYE. However, that would be entirely in the directive as to how to overcome their problems. You do not sit down and do the clerical work in connection with a claim?

Mr. KEENAN. Oh, no, sir.

Senator THYE. That has to be a State problem.

Mr. KEENAN. I think you might be interested that the State agencies themselves have increased their employment under this heavy workload by almost 10,000 people since November.

Senator THYE. What I was trying to get clear in my mind was where did that come back to you as an additional load upon your administrative requirements?

Mr. KEENAN. In the volume of requests for assistance. For example, with the increased benefits paid, the trust funds are being paid at a faster rate, and the States are asking for assistance in actuarial work.

That is merely an example. There are one after another types of service that we render to the States that are indirectly affected by this increase in workload and that is why Mr. Goodwin said that we were heavily pressed in the Bureau, but we are going to come in with a supplemental later on to ask for more staff for the Bureau.

Senator HILL. The House did grant you an increase of $261,000.

Mr. KEENAN. Yes, sir; 37 positions.

TRUST FUNDS OF STATES

Senator IVES. I wonder if the agency is keeping track of these trust funds of the various States, if you know how much they are at the present time, State by State.

Mr. GOODWIN. Yes, sir; we have a statement on that.

Senator HILL. Suppose you supply us with a table showing balances in the individual State trust funds as of the most recent date possible.

(The table referred to follows:)

Data on State unemployment trust fund balance, tax collections, and benefit payments on a calendar-year basis

[Dollars in thousands]

	State unemployment trust fund balance as of Feb. 28, 1958 (1)	Average annual tax collections, 1955–57 (2)	Average annual benefit payments, 1955–57 (3)	Ratio of trust fund balance to average annual benefit payments, col. 1 ÷ col. 3 (4)
United States	$8,261,195	$1,405,462	$1,488,289	5.6
Alabama	84,979	16,776	13,847	6.1
Alaska	[1] 2,429	4,511	6,192	.4
Arizona	58,465	6,879	3,984	14.7
Arkansas	43,388	6,575	7,618	5.7
California	956,629	152,787	117,751	8.1
Colorado	75,251	4,610	4,173	18.0
Connecticut	236,490	25,729	25,801	9.2
Delaware	14,016	2,606	3,512	4.0
District of Columbia	58,288	3,800	4,305	13.5
Florida	92,964	12,570	12,149	7.6
Georgia	149,153	20,819	19,124	7.8
Hawaii	22,838	2,642	2,845	8.0
Idaho	34,073	4,260	4,796	7.1
Illinois	478,379	73,607	73,274	6.5
Indiana	201,445	32,272	33,366	6.0
Iowa	111,509	6,661	7,746	14.4
Kansas	84,020	10,616	10,273	8.2
Kentucky	116,670	22,600	27,710	4.2
Louisiana	153,674	18,057	12,507	12.3
Maine	43,049	8,000	8,185	5.3
Maryland	107,426	16,832	18,747	5.7
Massachusetts	300,739	68,467	57,084	5.3
Michigan	257,779	81,162	116,480	2.3
Minnesota	108,787	16,260	22,225	4.9
Mississippi	33,364	6,866	9,113	3.7
Missouri	221,063	23,527	23,329	9.5
Montana	40,684	3,969	4,958	8.2
Nebraska	38,750	4,193	5,392	7.2
Nevada	18,343	4,421	4,171	4.4
New Hampshire	24,255	6,417	5,415	4.5
New Jersey	414,131	82,429	106,177	3.9
New Mexico	40,501	4,303	3,154	12.8
New York	1,313,975	222,012	227,294	5.8
North Carolina	178,293	26,171	27,601	6.5
North Dakota	9,386	2,316	2,891	3.2
Ohio	584,920	52,761	69,049	8.5
Oklahoma	52,328	8,967	10,000	5.2
Oregon	[2] 31,799	15,166	22,847	1.4
Pennsylvania	298,032	151,850	178,623	1.7
Rhode Island	29,137	17,599	15,295	1.9
South Carolina	74,077	10,999	10,972	6.8
South Dakota	13,882	1,378	1,448	9.6
Tennessee	86,790	25,711	31,059	2.8
Texas	294,769	23,515	23,540	12.5
Utah	38,985	5,117	4,304	9.1
Vermont	16,093	2,288	2,547	6.3
Virginia	90,167	9,279	10,180	8.9
Washington	193,567	37,054	36,070	5.4
West Virginia	63,547	11,439	11,908	5.3
Wisconsin	252,234	24,936	25,177	10.0
Wyoming	15,682	1,683	2,078	7.5

[1] $2,635,000 advanced to Alaska in February from Federal unemployment account.
[2] $14,000,000 advanced to Oregon in April from Federal unemployment account.

STATE INSOLVENCY

Senator IVES. My next question is, Is any State insolvent already?

Mr. KEENAN. No. There are none insolvent now.

Senator IVES. They cannot be insolvent, because they cannot pay out more than they have, as a matter of fact, but my State is down at the bottom.

Mr. GOODWIN. Alaska is the only State that has borrowed money.

Senator IVES. That is not a State yet.

Mr. GOODWIN. It is legally under our law. It is the only jurisdiction that has borrowed money under the provisions of the Reed Act and they have borrowed money three different times now.

Mr. Brown told me this morning that the Secretary's office had received a request from the State of Oregon for a loan from that fund, which represents the first time there has been such a request from a State within the continental limits.

Senator IVES. What fund is this you are talking about? Is that the fund that the three-tenths of 1 percent goes into?

Mr. GOODWIN. This is the $200 million loan fund which is built up from the three-tenths of 1 percent.

Senator IVES. In other words, you are keeping the $200 million revolving fund?

Mr. GOODWIN. Yes. The law specifies that it will be built up to $200 million, that the loans will be made out of that $200 million, and then the fund is rebuilt from the excess of the three-tenths of 1 percent tax.

EXCERPT FROM LAW

Senator HILL. I think it would be well to include in the record at this point an excerpt from the law covering this point, and I shall have the clerk include it in the hearings.

(The material referred to follows:)

EXCERPTS FROM THE SOCIAL SECURITY ACT

TITLE IX—MISCELLANEOUS PROVISIONS RELATING TO EMPLOYMENT SECURITY

APPROPRIATIONS

SEC. 901. (a) (1) There are hereby appropriated to the Unemployment Trust Fund, out of any moneys in the Treasury not otherwise appropriated, for the fiscal year ending June 30, 1954, and for each fiscal year thereafter, an amount equal to the amount by which—

(A) 100 percentum of the tax (including interest, penalties, and additions to the tax) received during the fiscal year under the Federal Unemployment Tax Act and covered into the Treasury; exceeds

(B) the sum of (i) the employment security administrative expenditures for such year, (ii) the refunds of such tax (including interest on such refunds) made during such fiscal year, and (iii) the amounts appropriated by section 1202 (b) for such fiscal year.

(2) The amount appropriated by paragraph (1) for any fiscal year shall be transferred from the general fund in the Treasury to the Unemployment Trust Fund at the close of such fiscal year. Each such transfer shall be based on estimates made by the Secretary of the Treasury as of the close of such fiscal year, but proper adjustment shall be made in the amount transferred at the close of the succeeding fiscal year to the extent that such estimates prove to be erroneous. The Secretary of the Treasury shall make his estimate of those employment security administrative expenditures for any fiscal year which are described in subsection (b) (1) only after conslutation with the Secretary of Labor.

(b) For the purposes of subsection (a), the term "employment security administrative expenditures" means, in the case of any fiscal year, the sum of—

(1) the aggregate of the amounts expended during the fiscal year for the purpose of assisting the States in (A) the administration of their unemployment compensation laws (including administration pursuant to agreements under title IV of the Veterans' Readjustment Assistance Act of 1951), (B) the establishment and maintenance of systems of public employment offices in accordance with the Act of June 6, 1933, as amended (29 U. S. C., sec.

49–49n), and (C) carrying into effect section 602 of the Servicemen's Readjustment Act of 1944, as amended; and

(2) the amount estimated by the Secretary of Labor as equal to the necessary expenses incurred during the fiscal year for the performance by the Department of Labor of its functions (except its functions with respect to Puerto Rico and the Virgin Islands) under (i) this title and titles III and XII of this Act, (ii) the Federal Unemployment Tax Act, (iii) the provisions of the Act of June 6, 1933, as amended, (iv) title IV (except section 602) of the Servicemen's Readjustment Act of 1944, as amended, and (v) title IV of the Veterans' Readjustment Act of 1952; and

(3) the amount estimated by the Secretary of the Treasury as equal to the necessary expenses incurred during the fiscal year for the performance by the Department of the Treasury of its functions under this title and titles III and XII of this Act under the Federal Unemployment Tax Act.

AMOUNTS CREDITED TO FEDERAL UNEMPLOYMENT ACCOUNT

SEC. 902. Whenever any amount is transferred to the Unemployment Trust Fund under section 901 (a), there shall be credited (as of the beginning of the succeeding fiscal year) to the Federal unemployment account so much of such amount as equals whichever of the following is the lesser:

(1) The total amount so transferred; or

(2) The amount by which $200,000,000 exceeds the adjusted balance in the Federal unemployment at the close of the fiscal year for which the transfer is made.

For the purposes of the preceding sentence, the term "adjusted balance" means the amount by which the balance in the Federal unemployment account exceeds the sum of the outstanding advances under section 1202 (c) to the Federal unemployment account.

AMOUNTS CREDITED TO STATES' ACCOUNTS

SEC. 903. (a) So much of any amount transferred to the Unemployment Trust Fund at the close of any fiscal year under section 901 (a) as is not credited to the Federal unemployment account under section 902 shall be credited (as of the beginning of the succeeding fiscal year) to the accounts of the States in the Unemployment Trust Fund. Each State's share of the funds to be credited under this subsection as of any July 1 shall be determined by the Secretary of Labor and certified by him to the Secretary of the Treasury on or before that date on the basis of reports furnished by the States to the Secretary of Labor by June 1 and shall bear the same ratio to the total amount to be so credited as the amount of wages subject to contributions under such State unemployment compensation law during the preceding calendar year which have been reported to the State by May 1 bears to the total of wages subject to contributions under all State compensation laws during such calendar year which have been reported to the States by such May 1.

(b) If the Secretary of Labor finds that on July 1 of any fiscal year—

(1) a State is not eligible for certification under section 303, or

(2) the law of a State is not approvable under section 3304 of the Federal Unemployment Tax Act,

then the amount available for crediting to such State's account shall, in lieu of being so credited, be credited to the Federal unemployment account as of the beginning of such July 1. If, during the fiscal year beginning on such July 1, the Secretary of Labor finds and certifies to the Secretary of the Treasury that such State is eligible for certification under section 303, that the law of such State is approvable under such section 3304, or both, the Secretary of the Treasury shall transfer such amount from the Federal unemployment account to the account of such State. If the Secretary of Labor does not so find and certify to the Secretary of the Treasury before the close of such fiscal year then the amount which was available for credit to such State's account as of July 1 of such fiscal year shall (as of the close of such fiscal year) become unrestricted as to use as part of the Federal unemployment account.

(c) (1) Amounts credited to the account of a State pursuant to subsection (a) shall, except as provided in paragraph (2), be used only in the payment of cash benefits to individuals with respect to their unemployment, exclusive of expenses of administration.

(2) A State may, pursuant to a specific appropriation made by the legislative body of the State, use money withdrawn from its account in the payment of

expenses incurred by it for the administration of its unemployment compensation law and public employment offices if and only if—

(A) the purposes and amounts were specified in the law making the appropriation.

(B) the appropriation law did not authorize the expenditure of such money after the close of the two-year period which began on the date of enactment of the appropriation law.

(C) the money is withdrawn and the expenses are incurred after such date of enactment, and

(D) the appropriation law limits the total amount which may be so used during a fiscal year to an amount which does not exceed the amount by which (i) the aggregate of the amounts credited to the account of such State pursuant to subsection (a) during such fiscal year and the four preceding fiscal years exceeds (ii) the aggregate of the amounts used by the State pursuant to this paragraph and charged against the amounts credited to the account of such State during any of such five fiscal years.

For the purposes of subparagraph (D), amounts used by a State during any fiscal year shall be charged against equivalent amounts which were first credited and which have not previously been so charged; except that no amount used during any fiscal year may be charged against any amount credited during a fiscal year earlier than the fourth preceding fiscal year.

* * * * * * *

Title XII of the Social Security Act, as Amended

TITLE XII—ADVANCES TO STATE UNEMPLOYMENT FUNDS

Sec. 1201. (a) If—

(1) the balance in the unemployment fund of a State in the Unemployment Trust Fund at the close of September 30, 1953, or at the close of the last day in any ensuing calendar quarter, is less than the total compensation paid out under the unemployment compensation law of such State during the twelve-month period ending at the close of such day;

(2) the Governor of such State applies to the Secretary of Labor during the calendar quarter following such day for an advance under this subsection; and

(3) the Secretary of Labor finds that the conditions specified in paragraphs (1) and (2) have been met,

the Secretary of Labor shall certify to the Secretary of the Treasury such amounts as may be specified in the application of the Governor, but the aggregate of the amounts so certified pursuant to any such application shall not exceed the highest total compensation paid out under the unemployment compensation law of such State during any one of the four calendar quarters preceding the quarter in which such application was made. For the purposes of this subsection, (A), the application shall be made on such forms, and shall contain such information and data (fiscal and otherwise) concerning the operation and administration of the State unemployment compensation law, as the Secretary of Labor deems necessary or relevant to the performance of his duties under this title, and (B) the term "compensation" means cash benefits payable to individuals with respect to their unemployment, exclusive of expenses of administration.

(b) The Secretary of the Treasury shall, prior to audit or settlement by the General Accounting Office, transfer from the Federal unemployment account to the account of any State in the Unemployment Trust Fund the amounts certified under subsection (a) by the Secretary of Labor (but not exceeding that portion of the balance in the Federal unemployment account at the time of such transfer which is not restricted as to use pursuant to section 903 (b)). Any amount so transferred shall be an advance which shall be repaid (without interest) by the State to the Federal unemployment account in the manner provided in subsections (a) and (b) (1) of section 1202.

Sec. 1202. (a) The Governor of any State may at any time request that funds be transferred from the account of such State to the Federal unemployment account in repayment of part or all of any remaining balance of advances made to such State under section 1201. The Secretary of Labor shall certify to the Secretary of the Treasury the amount stated in such request; and the Secretary of the Treasury shall promptly transfer such amount.

(b) (1) There are hereby appropriated to the Unemployment Trust Fund for credit to the Federal unemployment account, out of any moneys in the Treasury not otherwise appropriated, amounts equal to the amounts by which (A) 100 per centum of the additional tax received under the Federal Unemployment Tax Act by reason of the reduced credits provision of section 1601 (c) (2) of such Act and covered into the Treasury, exceeds (B) the amounts appropriated by paragraph (2). Any amount so appropriated shall be credited against, and shall operate to reduce, the remaining balance of advances under section 1201 to the State with respect to which employers paid such additional tax.

(2) Whenever the amount of such additional tax paid, received, and covered into the Treasury exceeds the remaining balance of advances under section 1201 to the State, there is hereby appropriated to the Unemployment Trust Fund for credit to the account of such State out of any moneys in the Treasury not otherwise appropriated, an amount equal to such excess.

(3) The amounts appropriated by paragraphs (1) and (2) shall be transferred at the close of the month in which the moneys were covered into the Treasury to the Unemployment Trust Fund for credit to the Federal unemployment account or to the account of the State, as the case may be, as of the first day of the succeeding month.

(c) There are hereby authorized to be appropriated to the Federal unemployment account, as repayable advances (without interest), such sums as may be necessary to carry out the purposes of this title.

SEC. 1203. When used in this title, the term "Governor" shall include the Commissioners of the District of Columbia.

NEW YORK'S BALANCE

Senator IVES. My next question is, what is New York's balance at the present time? The last I knew we had $1.3 billion. I do not know what it is now.

Mr. KEENAN. $1,313 million as of the end of February, Mr. Love says.

Senator IVES. That is the figure I have had.

Do you know how much they are spending monthly now?

Mr. GOODWIN. Mine is December 31.

Senator HILL. Do you have a more recent one?

Mr. KEENAN. Of all States?

Senator HILL. Yes, sir.

PRESENT SITUATION OF STATE FUNDS

Senator IVES. What State is in danger of hitting bottom say within the next 30 or 60 days?

Mr. GOODWIN. There is no additional State that would be in danger of hitting the bottom in that period.

Senator IVES. After July 1, there might be some?

Mr. GOODWIN. I don't think there would be any States that would exhaust their funds this next fiscal year.

Senator IVES. You mean 1959?

Mr. GOODMAN. Yes.

Senator IVES. That is assuming the recession lasts no longer than when?

Mr. GOODWIN. The States that are the closest to it, in addition to Oregon, are Pennsylvania and Michigan and Rhode Island.

Senator IVES. I would like to ask a question about Pennsylvania because that is comparable again to New York.

What is their balance at the present time, the last figure you have? I guess you do not have it at the present time.

Mr. GOODWIN. I have it for December 31.

Senator IVES. That does not mean much right now.

Senator GOODWIN. It is not up to date.

Senator IVES. They have had a lot of unemployment there in Pennsylvania which I happen to know about.

Mr. GOODWIN. We would have to furnish the up-to-date figure. On December 31, they had a balance of $346,771,000.

Senator IVES. That would not carry them very far on that kind of a basis.

As to this revolving fund, or whatever you call it, of the $200 million which the law says must be kept at that figure, I understand, what are you going to do when that is exhausted?

What is the Federal Government going to do? Is that a direct appropriation we have to make?

Mr. GOODWIN. I think it is questionable whether that will be exhausted because the reserves of most of the States are adequate to take care of the problem, and the kind of situation where we will have the heaviest drain on reserves is not one depression, but a series of them, because of the exhausting of benefits, the thing we were discussing earlier.

With the limited liability under the State laws, our best judgment is that this $200 million fund will carry through any situation we foresee.

Senator IVES. Is your fund $200 million right this minute?

Mr. GOODWIN. Yes, sir.

Senator IVES. It is right now?

Mr. GOODWIN. Yes, sir. It is a little more, as a matter of fact, because of the interest that has been earned by the fund.

NOTE.—As of March 31, 1958, the balance in the Federal unemployment account of the unemployment trust fund was $202,076,571.

DRAFTS ON TRUST FUND

Senator THYE. Mr. Goodwin, you have not been compelled to draw from it at all?

Mr. GOODWIN. Just for Alaska, Senator; we mentioned that before you came in.

Senator THYE. That is Territorial, but I mean States.

Mr. GOODWIN. That is right. We have this one request which came in this morning from the State of Oregon and they are eligible, although they would actually not go broke for several months yet.

Senator HILL. How much did they want, Mr. Goodwin?

Mr. KEENAN. $14 million.

Senator THYE. Why would Oregon be in that plight at this time and not some of the other States?

Mr. GOODWIN. Oregon had very heavy unemployment last year, Senator.

Senator THYE. Was that in lumber?

Mr. GOODWIN. Yes. The downturn started early in lumber and a few other parts of the economy, but the unemployment situation in Oregon last year was almost as bad as it is this year.

I think these charts we gave you, Nos. 2 and 3, show you that last March 16 the insured unemployment in Oregon was 8.3 percent and now this year it is 10.8 percent.

True, it is worse this year than it was last, but proportionately it was much higher last year than the country as a whole.

Senator THYE. The State of Washington is 9.7.

Mr. GOODWIN. Yes, and last year it was 6.3 percent.

Senator THYE. Montana is 13.6 and they have not run out of funds.

Mr. GOODWIN. That is right.

CAUSES OF VARIATION IN STATUS OF STATE FUNDS

Mr. KEENAN. The status of the funds differs State by State. Each State legislature sets its own experience rating which is a variation in tax rates, and some States have much more ample reserves relatively than other States.

This is true right across the board. There is a considerable variation in the reserves.

Senator IVES. Will you yield?

Senator THYE. Yes.

Senator IVES. I was going to ask this question: Do you find that the varying merit ratings have done anything to deplete these funds to an undue extent?

Mr. GOODWIN. I will answer that——

Senator IVES. I think we had a very sound system at one time and it suddenly got changed after I got down here for some reason.

Mr. GOODWIN. I think, without any question, there have been a few unwise decisions made, and there have been a few unwise decisions made on how the tax schedules have been set up in the State laws.

In most of the States the economy is sufficiently broad that if they are wise in the way they set their tax rates and the way they set their experience rating they can avoid getting into trouble of this kind.

In a State like Rhode Island, it is very hard to do it because the economy is not broad enough. They happen to have several industries that are unusually hard hit by unemployment and have been over a number of years, so it is extremely difficult for them to meet their problem without an abnormally high tax rate.

Senator IVES. Has the experience rating had anything to do with the plight of Oregon?

Mr. GOODWIN. I really do not know enough about the details of that law to have any opinion on it. Mr. Wagenet is here.

Have you anything to say?

Mr. WAGENET. I have no data with me but my recollection is that for the last several years the average tax rate in Oregon has been low.

Senator IVES. How low?

Mr. WAGENET. I haven't the figure before me. We can supply the figures for you. I understand it was 1.4 percent last year.

Senator IVES. No wonder they are in trouble. It was kept at 1.4 percent when they had all this unemployment?

Mr. WAGENET. Yes, sir.

Senator IVES. That answers the question.

Thank you.

Mexican Farm Labor Program

Mr. Goodwin. Mr. Chairman, we have one additional item that we want to talk about and that is the Mexican farm labor program.

Senator Hill. There will be inserted in the record at this point the usual tables and other material in connection with this item, together with the prepared statement of Mr. Goodwin thereon.

(The material referred to follows:)

[APPROPRIATION ESTIMATE]

"Salaries and Expenses, Mexican Farm Labor Program

"[Salaries and expenses, Mexican farm labor program:] For expenses, not otherwise provided for, necessary to carry out the functions of the Department of Labor under the Act of July 12, 1951 (65 Stat. 119), as amended, including temporary employment of persons without regard to the civil service laws, $2,250,000 *of which $910,600 shall be derived by transfer from the Farm Labor Supply Revolving Fund: Provided, That reimbursement to the United States under agreements hereafter entered into pursuant to section 502 of the Act of October 31, 1949, as amended (7 U. S. C. 1462), shall include all expenses of maintaining and operating migration and reception centers, including salaries and expenses of regular and other employees engaged therein."*

Amounts available for obligation

1958 actual appropriation	$2,250,000
1959 budget estimate	1,339,400
1959 transfers or authorizations estimated	910,600
Total 1959 funds estimated	2,250,000
Change requested for 1959	0
House allowance for 1959	480,600
House change over revised base 1958	−1,769,400

Obligations by activities

	Revised base, 1958		Budget estimate, 1959		House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Determining Mexican-labor requirements	8	$53,700	8	$53,700		
2. Supplying Mexican-labor requirements	209	1,294,300	209	1,294,300		
3. Determining compliance with contract provisions	60	480,600	60	480,600	60	$480,600
4. Farm-labor analysis	3	21,900	3	21,900		
5. Management and administrative services	31	210,900	31	210,900		
6. Field direction	22	188,600	22	188,600		
Total	333	2,250,000	333	2,250,000	60	480,600

Obligations by objects

	Revised base, 1958	Budget estimate, 1959	House allowance
Summary of personal services:			
Total number of permanent positions	333	333	60
Full time equivalent of all other positions	67	67	4
Average number of all employees	382	382	63
Direct obligations:			
Personal services	$1,758,200	$1,758,200	$337,800
Travel	240,000	240,000	87,000
Transportation of things	10,200	10,200	2,100
Communication services	60,200	60,200	14,200
Rents and utility services	13,500	13,500	5,300
Printing and reproduction	8,800	8,800	3,200
Other contractual services	51,900	48,600	8,600
Supplies and material	11,900	11,900	700
Equipment	5,000	5,000	300
Grants, subsidies and contributions	81,600	84,900	21,100
Taxes and assessments	8,700	8,700	300
Total	2,250,000	2,250,000	480,600

Summary of changes

	Positions	Amount
1958 actual appropriation	333	$2,250,000
1959 budget estimate	172	1,339,400
1959 transfers or authorizations requested	161	910,600
Total requested for 1959	333	2,250,000
Change requested for 1959	0	0

	Budget estimate, 1959		House allowance	
	Positions	Amount	Positions	Amount
INCREASES				
For mandatory items: Retirement contribution annualization rate of 6.5 percent in 1959 and 6.25 percent in 1958		$3,300		$900
DECREASES				
Other contractual services costs		3,300		900
Determining Mexican-labor requirements			8	53,700
Supplying Mexican-labor requirements			209	1,294,300
Farm-labor analysis			3	21,900
Management and administrative services			31	210,900
Field direction			22	188,600
Total decreases		3,300	273	1,770,300
Net change		0	−273	−1,769,400

Effect of House Action

Activity 1. Determining Mexican labor requirements.—The House allowed nothing for this activity. This is a reduction of 8 positions and $53,700 from the request and will require that this activity be eliminated.

Activity 2. Supplying Mexican labor requirements.—The House allowed nothing for this activity. This is a reduction of 209 positions and $1,294,300 from the request and will require that this activity be eliminated.

Activity 3. Determining compliance with contract provisions.—The House allowed the requested amount of $480,600.

Activity 4. Farm labor analysis.—The House allowed nothing for this activity. This is a reduction of 3 positions and $21,900 from the request and will require that this activity be eliminated.

Activity 5. Management and administrative services.—The House allowed nothing for this activity. This is a reduction of 31 positions and $210,900 from the request and will require that this activity be eliminated.

Activity 6. Field direction.—The House allowed nothing for this activity. This is a reduction of 22 positions and $188,600 from the request and will require that this activity be eliminated.

STATEMENT OF ROBERT C. GOODWIN, DIRECTOR, BUREAU OF EMPLOYMENT SECURITY, ON THE 1959 SALARIES AND EXPENSES, MEXICAN FARM LABOR PROGRAM REQUEST

Mr. Chairman, for the Mexican farm labor program, we are requesting $2,250,000, of which $910,600 is to be derived by transfer from the farm labor supply revolving fund if the Congress approves the proposed appropriation language. The appropriation language provides for reimbursement of the direct costs of recruiting and contracting Mexican nationals from the farm labor supply revolving fund. The amount requested is the same as the $2,500,000 which was appropriated for 1958.

This program is carried out under Public Law 78 as implemented by an agreement with the Government of Mexico. Public Law 78 and the agreement with the Mexican Government expires June 30, 1959. The use of foreign workers is required because the supply of domestic workers has continued to decrease as the result of the longstanding trend of migration from rural to urban areas. Also, the development of surburban communities has, in recent years, tended to bring nonagricultural jobs closer to rural areas. In calendar year 1957 alone, the farm population decreased by about 2 million. We expect this trend to continue although at a lower rate. The reason people have been migrating to the cities is that usually the jobs are higher paying and require fewer hours of work. The trend away from the farm has been encouraged by high industrial employment and substantial job opportunities in urban areas.

The almost complete elimination of employment of webtacks in agriculture has also created a demand for legal workers. Despite the reduction in acreage of some crops which require large numbers of workers, there has not been a corresponding decrease in labor requirements because intensive farming methods and technological changes instituted have caused higher production in the remaining acreage and a consequent need for more workers.

More than 450,000 workers were contracted to agricultural employers in 1957 and it was expected that about the same number would be needed in 1958. When we prepared the appropriation request we expected that American employers would need 450,000 Mexican workers in 1959. However, weather conditions in Texas, Arkansas, Louisiana, and New Mexico have been abnormal so that we now expect to contract about 15,000 fewer workers in 1958. The recruitment of additional domestic farmworkers for shortage areas is difficult for a variety of reasons: (1) The employment is intermittent and uncertain; (2) wage rates in agriculture are lower than in industry; (3) the physical requirements and difficulty of work, such as cotton chopping, and other forms of stoop labor; (4) living conditions for workers and their families are not uniformly good; (5) shifting children from schools and churches breaks up family life. These factors contribute to the paradoxical situation of unemployed American workers seeking jobs in cities while at the same time foreign workers have to be brought in to get the crops planted, cultivated, and harvested.

If we are successful in recruiting and placing more domestic workers, we will be able to cut down on the number of Mexican nationals brought in and make a small reduction in the cost of operating the reception centers and migratory stations. A reduction in the number of workers contracted would have to be very substantial to affect costs greatly since it would only affect the use of temporary w. a. e. employees. Our basic staff is required on a year-round basis to handle the regular work and has to be augmented during the peak contracting periods. Any reduction in costs or savings would be used in the program to assure that the employment and wages of domestic workers was not being affected adversely.

We are applying more intensive efforts and are now stepping up our domestic recruitment efforts through intensified recruitment drives, expansion of our activ-

ities in connection with the annual worker plan, and through special arrangements for the exchange of workers between States. Through the annual worker plan, we have been able to provide more continuity of employment for migrant and seasonal farmworkers by prescheduling these workers to a succession of farm jobs.

At this time I would like to review the operation of this program. Before any foreign workers are made available we must first determine and certify that sufficient domestic workers are not and will not be available where and when needed. We use every means available to recruit domestic workers. After determining that the need for labor cannot be met by the domestic labor force, we certify that a shortage exists and authorize the bringing in of a specific number of foreign workers for limited periods of employment for specified employers in designated areas. Even after the employment of foreign workers, domestic workers are given preference in employment. When domestic workers become available foreign workers are removed.

After the needs are determined, individual requests for workers are consolidated at 5 reception centers on the border and transmitted to 3 migratory stations in Mexico. The workers are recruited by the Mexican Government and instructed to report to the migratory stations where they are examined for physical condition, qualification for farmwork, and admissibility under immigration laws. We operate the reception centers and migratory stations under this program. The Immigration and Naturalization Service and the Public Health Service are engaged in their phases of admission functions at these points. Also, we arrange transportation for the selected workers from migratory stations to reception centers where they are contracted to individual employers and associations. From the time the workers are accepted at the migratory station until contracted to an employer at the reception center and after their return to the reception center by the employer upon completion of their contract, the Mexican workers are the responsibility of the Bureau with reference to subsistence and medical care. These costs are charged to the farm labor supply revolving fund.

The farm labor supply revolving fund is maintained by fees paid by farmers for contracting and recontracting workers. Under Public Law 78 employers are required to reimburse the United States for essential expenses incurred in the transportation and subsistence of workers in an amount not to exceed $15 per worker.

Up to January 1, the contracting and recontracting fees for workers were $7 and $4, respectively. We hoped this would be enough to keep the fund at an adequate level, however, because of increased cost factors this amount turned out to be less than the cost of the transportation and subsistence for the workers. Since it appeared that the balance of the fund would be depleted in the January-April 1958 period fees were increased to $10 for contracting and $5 for recontracting. If the direct costs of recruiting and contracting at reception centers and migratory stations are charged to the revolving fund, fees will have to be increased to $12 and $6 on July 1, 1958, to keep the fund at an adequate operating level.

Last year I advised you of the very bad housing conditions existing in some places where these foreign workers were employed. Since that time we have devoted a substantial portion of our field representatives' time to the inspection of this housing. We were able to inspect 8,006 units during 1957 and we expect to inspect about 8,500 in 1958 and 1959. There are about 35,000 units in which Mexicans are housed. I am very happy to be able to report that under the minimum housing standards issued on March 25, 1957, substantial improvements have been made. With the cooperation of responsible employers, I believe we have made progress in bettering some bad situations.

During 1959, we intend to place considerably more emphasis on the subject of wages and housing. One of the chief concerns about the employment of foreign workers has been the possible adverse effect such employment may have on the wages and working conditions of our domestic workers. We have reason to believe that in some areas the wages of domestic workers have been adversely affected. We mean to move ahead with stepped-up investigations to make certain that foreign workers are receiving not less than the prevailing wage rates paid to domestic workers and that such prevailing rates have not been undermined by the presence of foreign workers.

We have recently issued minimum standard menus for Mexican workers fed at central feeding establishments while under contract to employers. These menus have been prepared in cooperation with employers who furnish and maintain these establishments. We believe that with the use of these menus we will be able to get uniformly good standards in feeding and assure that the worker gets the quality and quantity of food he is charged for.

By bettering working and living conditions in farmwork, we hope to make job opportunities in agriculture more attractive to domestic workers and to alleviate somewhat the unemployment situation.

AMOUNT REQUESTED

Mr. GOODWIN. For the administration of this program we requested a total of $2,250,000 which is the same as was appropriated for fiscal year 1958. However, for 1959 we requested that $1,339,400 of it be a direct appropriation and that the balance of $910,600 be derived by transfer from the farm labor supply revolving fund.

Senator HILL. In other words, you have no authority to use this revolving fund unless we give you that authority for these particular purposes; isn't that right?

Mr. GOODWIN. That is right; yes, sir.

Senator HILL. And your purpose is what we might call for administrative overhead costs?

Mr. GOODWIN. These are purposes for which the Bureau of the Budget felt, when we discussed it with them, the employees or the farmers could probably be charged.

They do not include the compliance activities, but they do include all of the work at our centers where the recruitment is done for the Mexican workers.

EFFECT OF HOUSE COMMITTEE RECOMMENDATIONS

The House committee recommended a direct appropriation of $480,600 for compliance activities—that is the amount we requested for activity III, for determining compliance with the contract provisions—and $1,550,000 to be derived by transfer from the farm labor supply revolving fund.

They recommended a total for these two of $2,030,600. It is absolutely essential that we get the restoration for this program. If we got only the $480,600 in effect it would close up the program.

When we submitted the request we estimated that we would contract about 450,000 Mexican workers in this country next year. With the development of the unemployment and the economic downturn, it is quite clear now that this number will be reduced.

We are not sure at this point in time how much, but it should be possible to reduce the number. However, many of the unemployed domestic workers are not able or willing to do the stoop type of work that is involved in most of this work.

About 29 percent of our unemployed workers in the labor force are women and they would not be available for agricultural work.

NEED FOR MEXICAN LABOR

Another point is that the Mexican nationals are used primarily in the southwestern part of the United States, while the bulk of our unemployment is in the large industrial centers in the northern and eastern part of the country.

It also should be noted that the wetbacks, or the Mexican labor, that used to come into the Southwest to perform much of this work have practically disappeared from farm employment.

All of these considerations add up to the fact that we will need some of these Mexican workers this next season. We are asking for the full amount of this request because we feel that our problem in making sure that domestic workers get the first try at any work in this country

is going to be even greater this year. Any money we can save at the centers, because fewer workers will be coming in, we feel very strongly that we ought to use in a more effective compliance program.

Our compliance program has never been adequately staffed and, as we see it, our problem on compliance will be much harder this year than it has been in the past.

That is about the story on our Mexican program. On the compliance end, it is our conclusion that we will need more than we have in this request on that function and the Department is now considering asking for a supplemental request in that regard.

Senator THYE (presiding). Are there any further questions?

Senator IVES. Mr. Chairman, before these gentlemen leave, I would like to thank them for the very important consideration they have given us.

Mr. GOODWIN. Thank you, Senator.

UNEMPLOYMENT COMPENSATION FOR VETERANS

UNEMPLOYMENT COMPENSATION FOR FEDERAL EMPLOYEES

Senator THYE. I am informed by the clerk that we have had no discussion of two additional items—for "Unemployment compensation for veterans," and for "Unemployment compensation for Federal employees." The House has allowed the budget estimates in full for each of these items and inasmuch as the benefits covered are a statutory obligation and must be provided by the Congress, we will place in the record the usual tables and other material including the prepared statements of Mr. Goodwin with respect to each item.

(The material referred to follows:)

[APPROPRIATION ESTIMATE]

"UNEMPLOYMENT COMPENSATION FOR VETERANS

"[Unemployment compensation for veterans:] For payments to unemployed veterans as authorized by title IV of the Veterans' Readjustment Assistance Act of 1952, [$63,800,000] *$19,000,000.*

"Unemployment compensation for veterans, next succeeding fiscal year: For making, after May 31 of the current fiscal year, payments to States, as authorized by title IV of the Veterans' Readjustment Assistance Act of 1952, such sums as may be necessary to pay benefits for the first quarter of the next succeeding fiscal year, and the obligations and expenditures thereunder shall be charged to the appropriation therefor for that fiscal year."

Amounts available for obligation

1958 actual appropriation	$36, 800, 000
1958 supplemental appropriation	25, 000, 000
Transfers to and from: 1957 State balance available in 1958	1, 997, 294
Total funds available	63, 797, 294
Revised base, 1958	63, 797, 294
1959 budget estimate	19, 000, 000
Change requested for 1959	−44, 797, 294
House allowance for 1959	19, 000, 000
House change over revised base, 1958	−44, 797, 294

Obligations by activities

Unemployment compensation payments:	
Revised base, 1958	$63, 797, 294
Budget estimate, 1959	19, 000, 000
House allowance	19, 000, 000

Initial claims, weeks covered by continued claims, and amount of compensation, fiscal years 1957 and 1958 (corrected to Mar. 21, 1958)

	Total initial claims		Weeks covered by continued claims		Amount of compensation			Percent of same 1957 month	Cumulative percent of same 1957 period
	1957	1958	1957	1958	1957	Cumulative percentage of fiscal year 1957 expenditures	1958		
July	38,626	30,456	235,555	207,193	$4,907,203	8.9	$4,406,192	90	90
August	36,965	29,640	251,265	201,335	5,639,223	19.1	4,374,335	78	83
September	23,445	23,292	194,931	176,074	4,420,783	27.2	3,738,451	85	84
Total, 1st quarter	99,036	83,388	681,751	584,602	14,967,209		12,518,978	84	
October	24,890	26,849	150,504	145,471	3,230,534	33.0	2,977,129	92	85
November	29,904	31,051	152,667	159,155	3,137,844	38.7	3,065,989	98	87
December	32,643	40,450	187,037	232,372	3,800,758	45.6	4,547,057	120	92
Total, 2d quarter	87,437	98,350	490,208	536,998	10,169,136		10,590,175	104	
Total, 1st 6 months	186,473	181,738	1,171,959	1,121,600	25,136,345		23,109,153		92
January	45,627	53,502	275,643	335,109	5,545,564	55.7	6,915,154	125	98
February	32,532	42,615	269,021	370,547	5,513,112	65.7	7,441,421	135	104
March	28,132		264,717		5,889,716	76.4			
Total, 3d quarter	106,291		809,381		16,948,392				
April	26,345		245,652		5,141,917	85.7			
May	22,794		195,398		4,209,928	93.3			
June	32,616		179,857		3,676,744	100.0			
Total, 4th quarter	81,755		620,907		13,028,589				
Total, 2d 6 months	188,046		1,430,288		29,976,981				
Total, 12 months	374,519		2,602,247		55,113,326	100.0			

STATEMENT OF ROBERT C. GOODWIN, DIRECTOR, BUREAU OF EMPLOYMENT SECURITY, ON THE 1959 UNEMPLOYMENT COMPENSATION FOR VETERANS' REQUEST

Mr. Chairman, for the payment of unemployment compensation benefits to unemployed Korean veterans in 1959, we are requesting $19 million. This represents a very sharp drop of $44,800,000 from the $63,800,000 which is the latest estimate of requirements in 1958.

The estimate for 1959 was prepared when it was anticipated that insured unemployment in 1958 and 1959 would be at about the level experienced in fiscal year 1957. The estimate assumes that benefit payments in 1959 will be lower than in 1958 because of the effects of the President's proclamation of January 1, 1955, and the amendment to title IV of the Veterans' Readjustment Assistance Act which will become effective on July 26, 1958. These restrict the eligibility of veterans for payments under the program. Since the estimate was prepared, insured unemployment has risen rapidly. At present, we are reviewing the need for funds in fiscal year 1959 and, if additional funds are needed, the Congress will be advised before the appropriation bill is passed.

APPROPRIATION ESTIMATE

"*UNEMPLOYMENT COMPENSATION FOR FEDERAL EMPLOYEES*

"[Unemployment compensation for Federal employees:] For payments to unemployed Federal employees, either directly or through payments to States, as authorized by title XV of the Social Security Act, as amended, [$46,500,000] *$27,800,000.*

"Unemployment compensation for Federal employees, next succeeding fiscal year: For making, after May 31 of the current fiscal year, payments to States, as authorized by title XV of the Social Security Act, as amended, such amounts as may be required for payment to unemployed Federal employees for the first quarter of the next succeeding fiscal year, and the obligations and expenditures thereunder shall be charged to the appropriation therefor for that fiscal year."

Initial claims, weeks covered by continued claims, and amount of compensation, fiscal years 1957 and 1958 (corrected to Mar. 21, 1958)

	Total initial claims		Weeks covered by continued claims		Amount of compensation			Percent of same 1957 month	Cumulative percent of same 1957 period
	1957	1958	1957	1958	1957	Cumulative percentage of fiscal year 1957 expenditures	1958		
July	13,111	15,067	81,584	95,484	$1,947,628	7.5	$2,160,709	111	111
August	9,271	11,176	82,924	97,732	2,127,822	15.6	2,552,464	120	116
September	7,378	11,782	66,738	96,057	1,727,564	22.3	2,458,522	142	124
Total, 1st quarter	29,760	38,025	231,246	289,273	5,803,014		7,171,695	124	
October	10,032	20,907	71,333	115,044	1,756,070	29.0	2,819,199	161	132
November	11,019	20,053	74,459	136,929	1,793,058	35.9	3,205,768	179	141
December	10,630	19,449	78,235	172,710	1,852,994	43.0	4,524,204	244	158
Total, 2d quarter	31,681	60,409	224,027	424,683	5,402,122		10,549,171	195	
Total, 1st 6 months	61,441	98,434	455,273	713,956	11,205,136		17,720,866		158
January	17,890	25,347	109,111	212,997	2,557,624	52.8	5,663,631	221	170
February	11,698	16,880	105,599	208,190	2,448,147	62.2	5,989,290	245	181
March	10,383		106,297		2,749,100	72.8			
Total, 3d quarter	39,971		321,007		7,754,871				
April	12,118		102,039		2,470,585	82.2			
May	10,982		94,267		2,411,791	91.5			
June	10,539		82,593		2,213,363	100.0			
Total, 4th quarter	33,639		278,899		7,095,739				
Total, 2d 6 months	73,610		599,906		14,850,610				
Total, 12 months	135,051		1,055,179		26,055,746	100.0			

STATEMENT OF ROBERT C. GOODWIN, DIRECTOR, BUREAU OF EMPLOYMENT SECURITY, ON THE 1959 UNEMPLOYMENT COMPENSATION FOR FEDERAL EMPLOYEES' REQUEST

Mr. Chairman, for the payment of unemployment compensation benefits to unemployed Federal workers in 1959 we are requesting $27,800,000. This is a decrease of $18,700,000 from the $46,500,000 appropriated for fiscal year 1958.

The rate of insured unemployment in the Federal workers' program has been extremely low. In each year through calendar year 1957 the rate has been less than 1 percent. It has also been less than one-third of the rate of insured unemployment in the State programs. However, in 1958 the rate is expected to increase because more Federal workers have been separated than there were in 1957. Also, as the labor market has softened, Federal workers have had more difficulty in finding employment.

The appropriation request for 1959 is based upon an assumption that the volume of insured unemployment among Federal workers will be the same as it was in 1957. We have been informed by the Federal agencies that most of the workers to be affected in 1958 have already been laid off. The number of layoffs in 1959 is expected to drop below that of 1958 and return to the level of 1957. However, if when the appropriation bills are enacted finally by the Congress it becomes necessary for the Federal agencies to resume layoffs at an accelerated rate, it may become necessary to request additional funds.

In fiscal year 1957, the State agencies paid out almost $26,100,000 in benefit payments to unemployed Federal workers. The increase of $1,700,000 over 1957 expenditures is related to the estimated increase in the average weekly benefit payment from $26.77 in 1957 to $28.50 in 1959. The amount of the average weekly benefit payment has risen steadily from February 1957, when it was $26.16, until in December 1957 it reached $29.19. The rise is related to the increase in benefit rates in the State programs. Benefits in this program are paid at State rates.

BUREAU OF EMPLOYEES' COMPENSATION

STATEMENTS OF WILLIAM McCAULEY, DIRECTOR, BUREAU OF EMPLOYEES' COMPENSATION, AND THEODORE SCHWARTZ, CHAIRMAN, EMPLOYEES' COMPENSATION APPEALS BOARD

APPROPRIATION ESTIMATE

"BUREAU OF EMPLOYEES' COMPENSATION

"SALARIES AND EXPENSES

"[Salaries and expenses:] For necessary administrative expenses and not to exceed [$113,400] *$99,000* for the Employees' Compensation Appeals Board, [$2,838,000] *$2,810,600*, together with not to exceed $47,400 to be derived from the fund created by section 44 of the Longshoremen's and Harbor Workers' Compensation Act, as amended (33 U. S. C. 906)."

Amounts available for obligation

1958 actual appropriation	$2, 838, 000
Transfers to and from: Transfer from longshore trust fund	47, 400
Total funds available	2, 885, 400
Deduct nonrecurring items:	
Personal services	5, 270
Travel	2, 400
Transportation of things	12, 400
Rents and utility services	63, 200
Printing and reproduction	9, 000
Equipment	20, 000
Grants, subsidies, and contributions	130
Revised base 1958	2, 773, 000
1959 budget estimate	2, 810, 600
1959 transfers or authorizations estimated	47, 400
Total 1959 funds estimated	2, 858, 000
Change requested for 1959	+85, 000
House allowance for 1959:	
Appropriation	2, 810, 600
Transfer authorized	47, 400
Total	2, 858, 000
House change over revised base 1958	+85, 000

Obligations by activities

	Revised base, 1958		Budget estimate, 1959		House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
DIRECT OBLIGATIONS						
1. Disposition of compensation claims:						
(a) Federal employees	307	$1, 758, 640	307	$1, 761, 860	307	$1, 761, 860
(b) Longshoremen and harbor workers	96	642, 460	112	723, 750	112	723, 750
(c) Executive direction and management services	25	143, 500	25	143, 810	25	143, 810
(d) Administration of War Claims Act	14	82, 000	14	82, 180	14	82, 180
2. Appeals from determinations of Federal employee claims	11	99, 000	11	99, 000	11	99, 000
Total direct obligations	453	2, 725, 600	469	2, 810, 600	469	2, 810, 600
REIMBURSABLE OBLIGATIONS						
3. Administration of Longshoremen's rehabilitation program	7	47, 400	7	47, 400	7	47, 400
Total	460	2, 773, 000	476	2, 858, 000	476	2, 858, 000

Obligations by objects

	Revised base, 1958	Budget estimate, 1959	House allowance
Summary of personal services:			
Total number of permanent positions	460	476	476
Full-time equivalent of all other positions	None	None	None
Average number of employees	448	464	464
Direct obligations:			
Personal services	$2,253,910	$2,321,210	$2,321,210
Travel	108,000	109,200	109,200
Transportation of things	5,600	6,100	6,100
Communication services	42,400	43,200	43,200
Rents and utility services	2,800	2,800	2,800
Printing and reproduction	29,550	29,550	29,550
Other contractual services	114,440	114,940	114,940
Supplies and materials	19,480	20,280	20,280
Equipment	14,000	18,500	18,500
Grants, subsidies, and contributions	133,920	143,320	143,320
Taxes and assessments	1,500	1,500	1,500
Total	2,725,600	2,810,600	2,810,600
Reimbursable obligations:			
Personal services	35,200	35,200	35,200
Travel	8,000	8,000	8,000
Transportation of things	100	100	100
Communication services	500	500	500
Printing and reproduction	500	500	500
Other contractual services	150	150	150
Supplies and materials	350	350	350
Equipment	400	400	400
Grants, subsidies, and contributions	2,200	2,200	2,200
Total	47,400	47,400	47,400
Total estimate	2,773,000	2,858,000	2,858,000

Summary of changes

	Positions	Amount
1958 actual appropriation	455	$2,838,000
Transfer to and from: From longshore trust fund	7	47,400
Total funds available	462	2,885,400
Deduct nonrecurring items:		
Personal services	2	5,270
Travel		2,400
Transportation of things		12,400
Rents and utility services		63,200
Printing and reproduction		9,000
Equipment		20,000
Grants, subsidies, and contributions		130
Revised base, 1958	460	2,773,000
1959 budget estimate	469	2,810,600
1959 transfers or authorizations requested	7	47,400
Total requested for 1959	476	2,858,000
Change requested for 1959	+16	+85,000

Summary of changes—Continued

	Budget estimate, 1959		House allowance	
	Position	Amount	Position	Amount
INCREASES				
For mandatory items:				
Retirement contribution annualization rate of 6.5 percent in 1959 and 6.25 percent in 1958	----------	$5,000	----------	$5,000
Annualization cost for 43 additional positions allocated for 1958	----------	53,400	----------	53,400
Offsets against annualization costs:				
Excess personnel carried due to opening new offices	----------	36,900	----------	36,900
Overtime to keep workload current	----------	16,500	----------	16,500
Subtotal	----------	5,000	----------	5,000
For program items:				
Additional staff in longshore district offices to handle increased workload	16	80,000	16	80,000
Total increase	16	85,000	16	85,000
DECREASES				
Nonrecurring:				
Personal services	2	5,270	2	5,270
Travel	----------	2,400	----------	2,400
Transportation of things	----------	12,400	----------	12,400
Rents and utility services	----------	63,200	----------	63,200
Printing and reproduction	----------	9,000	----------	9,000
Equipment	----------	20,000	----------	20,000
Grants, subsidies, and contributions	----------	130	----------	130
Total decrease	----------	112,400	----------	112,400
Net change	−2	−27,400	−2	−27,400

APPROPRIATION ESTIMATE

"*Employees' Compensation Fund*

"[Employees' compensation fund:] For the payment of compensation and other benefits and expenses (except administrative expenses) authorized by law and accruing during the current or any prior fiscal year, including payments to other Federal agencies for medical and hospital services pursuant to agreement approved by the Bureau of Employees' Compensation; continuation of payment of benefits as provided for under the head "Civilian War Benefits" in the Federal Security Agency Appropriation Act, 1947; the advancement of costs for enforcement of recoveries in third-party cases; the furnishing of medical and hospital services and supplies, treatment, and funeral and burial expenses, including transportation and other expenses incidental to such services, treatment, and burial, for such enrollees of the Civilian Conservation Corps as were certified by the Director of such Corps as receiving hospital services and treatment at Government expense on June 30, 1943, and who are not otherwise entitled thereto as civilian employees of the United States, and the limitations and authority of the Act of September 7, 1916, as amended (5 U. S. C. 796), shall apply in providing such services, treatment, and expenses in such cases and for payments pursuant to sections 4 (c) and 5 (f) of the War Claims Act of 1948 (50 U. S. C., app. 2012); such amount as may be required during the current fiscal year."

Amounts available for obligation, 1958 and 1959

Appropriation:	
1958	$57,600,000
1959	57,000,000

Obligations by activities

Description	Base, 1958	Estimate, 1959	Change
1. Benefits for Federal civilian employees	$37,850,000	$37,850,000	0
2. Benefits for reservists of the Armed Forces	17,500,000	17,000,000	−$500,000
3. Benefits for members of Civil Air Patrol	50,000	72,000	+22,000
4. Benefits for employees on Federal relief work projects	640,000	620,000	−20,000
5. War-connected benefits for employees of Government contractors	110,000	100,000	−10,000
6. Civilian war benefits	30,000	25,000	−5,000
7. Benefits under War Claims Act	1,420,000	1,333,000	−87,000
Total obligations	57,600,000	57,000,000	−600,000

Summary of changes

Appropriation, 1958	$57,600,000
Budget estimate, 1959	57,000,000
Change requested for 1959	−600,000
Increase in benefits for members of the Civil Air Patrol	+22,000
Decrease in benefits for—	
Reservists of the Armed Forces	−500,000
Relief work projects	−20,000
Employees of Government contractors	−10,000
Civilian war benefits	−5,000
War Claims Act	−87,000
Net change proposed for 1959	−600,000

NARRATIVE DESCRIPTION OF PROGRAM

This appropriation covers all benefits payable from the compensation fund established by section 35 of the Federal Employees' Compensation Act, including benefits payable under sections 4 (c) and 5 (f) of the War Claims Act of 1948.

Federal Employees' Compensation Act

Federal employees.—This act authorized payment of benefits to civil employees of the United States disabled as a result of injuries sustained while in the performance of duty, and to the dependents of employees who die as a result of such injuries. Certain of these benefits are payable during the lifetime of the beneficiary, and the principal annual cost is for permanent disability and death compensation for which liability was incurred in prior years. Expenditures from this fund for temporary disability and medical care are directly influenced more particularly by changes in the number of new cases received within the current and preceding year. The estimate for the budget year includes $37,850,000 for benefit payments for Federal employees, the same as for 1958.

Reservists.—The benefits of the Federal act have been extended also for the injury or death of members of the Reserve components of the Armed Forces occurring in line of duty when on active duty or when engaged in authorized training in time of peace. As of June 30, 1957, there were 4,918 cases on the continuing payrolls of the Bureau, an increase of 447 since June 30, 1956.

It is expected that payments will decrease during 1959 as a result of Public Law 884 approved August 1, 1956, which repealed legislation providing compensation coverage for reservists in respect to casualties occurring after December 31, 1956.

Civil Air Patrol.—Benefits have been extended to volunteer members of the Civil Air Patrol under Public Law 955 (70 Stat. 980). This act was approved August 3, 1956, and payments for the past year totaled $26,826. It is estimated that $50,000 will be required for 1958 and $72,000 for 1959.

Relief-work employees.—The cost for benefits extended to employees on Federal relief-work projects in operation from 1933 to 1940 is expected to drop slightly because of the liquidating nature of this program. It is estimated that approxi-

mately $620,000 will be expended in 1959 for this group of beneficiaries as compared to an estimate of $640,000 for 1958, a decrease of $20,000.

Employees of Government contractors.—The compensation fund is also available for payment of certain war-risk benefits provided by the act of December 2, 1942, as amended, including the payment of accrued wages to employees captured by the enemy and death benefits to dependents of employees who died as a result of enemy action. This program is also of a liquidating nature and costs for 1959 have been estimated at $100,000, a decrease of $10,000 over 1958.

Civilian war benefits.—Benefits extended under this program to certain defense workers injuried prior to April 30, 1945, or to their dependents in case of death, are estimated at $25,000 for 1959, a decrease of $5,000 over 1958.

War Claims Act

Benefits are paid for claims arising under sections 4 (c) and 5 (f) of the War Claims Act of 1948 and cover employees of Government contractors and civilian American citizens who were captured by the Imperial Japanese Government. For fiscal year 1957 funds for these benefits were provided from the war claims fund. Starting in fiscal year 1958, funds for these costs are incorporated in the annual appropriation (68 Stat. 1036).

Changes proposed for 1959

The 1959 estimate of $57 million includes $1,333,000 for benefits under the War Claims Act and is $600,000 less than the estimate for 1958. This reduction is largely due to legislation repealing compensation coverage under this act for reservists of the Armed Forces.

Statistics—Table of overall costs by category of employees covered

[Amounts expressed in thousands of dollars]

	Actual, 1957	Estimate, 1958	Estimate, 1959
Federal Employees' Compensation Act:			
Federal employees	$36,778	$37,850	$37,850
Reservists	16,965	17,500	17,000
Civil Air Patrol	27	50	72
Works relief employees	676	640	620
Employees of contractors	126	110	100
Defense employees	35	30	25
Total FECA	54,607	56,180	55,667
War Claims Act of 1948:			
Employees of contrators	185	180	173
Civilian American citizens	1,300	1,240	1,160
Total War Claims Act	1,485	1,420	1,333
Grand total	56,092	57,600	57,000

PREPARED STATEMENT

Senator THYE. You may proceed, Mr. McCauley.

Mr. MCCAULEY. Mr. Chairman, we filed a statement with the committee which I suggest be made part of the record.

(The statement referred to is as follows:)

STATEMENT OF WILLIAM MCCAULEY, DIRECTOR, BUREAU OF EMPLOYEES' COMPENSATION

The proposed administrative appropriation of $2,810,600 includes $99,000 for the Employees' Compensation Appeals Board which is a separate administrative unit in the Department of Labor. My statement is confined to the operating programs of the Bureau of Employees' Compensation.

FUNCTIONS OF THE BUREAU

There has been no change in the functions of the Bureau during the past year. The Bureau's operations are limited exclusively to the administration of Federal workmen's compensation legislation as follows:

(1) The Federal Employees' Compensation Act;

(2) The Longshoremen's and Harbor Workers' Compensation Act and its extensions; and

(3) Provisions of the War Claims Act providing disability and death benefits.

The legislation cited under (1) and (2) currently provide workmen's compensation protection for approximately 3½ million employees in public and private employment. About 70 percent of the employees covered are civilians employed by the United States. Private employments covered include (1) longshoremen, ship-repairmen and others while engaged in maritime employment on navigable waters of the United States; (2) persons employed in private enterprise in the District of Columbia; (3) employees of Government contractors engaged in work outside the continental United States and; (4) employees in operations conducted on the outer continental shelf in the exploration and development of natural resources.

The legislation cited under (3) authorized payment of disability and death benefits and medical care for civilian American citizens captured by the Japanese in the Philippine Islands and other specified areas in the Pacific during World War II. It also provided special benefits for war risk injuries to employees of Government contractors.

FEDERAL EMPLOYEES' COMPENSATION ACT PROGRAM

This is the oldest and largest of the Bureau's programs and costwise represents 97 percent of the Bureau's expenditures. This is due to the cost of benefits for injuries and deaths which occurred in prior years. It may be noted in this connection that 30 percent of the cost of benefits during the current year is for death benefits payable to dependents of military reservists for deaths occurring prior to January 1, 1957. The cost of administering this program represents about two-thirds of the total administrative appropriation for the Bureau.

The budget estimate for this program in 1959 is based on the assumption that the workload will be about the same as for the current year. A total of 98,000 new injury cases is expected during both years. If the number of Federal employees should increase in connection with accelerated defense programs a corresponding increase in the number of compensation cases may be expected. In addition to the adjudication of new cases it is necessary to continue the payment of benefits in the 18,000 continuing cases on the compensation rolls.

The estimate provides $1,761,860 for the administration of this program in 1959. This represents a reduction of $94,780 below the amount allocated for this purpose in the current year. The reduction is due to certain nonrecurring costs in connection with the further decentralization of this program during the current year.

Funds were provided by Congress in the current year for decentralizing this program into three geographical areas. This necessitated an enlargement of the already existing longshoremen's and harbor workers' district offices at Boston, New York, and Chicago. These changes have now been made although some delays were encountered in securing adequate office quarters at each location. The Chicago office commenced operations on a decentralized basis November 4, 1957, and is servicing claims reported from nine Midwestern States. The Boston office commenced similar operations December 2, 1957, and has jurisdiction over cases arising in the six New England States. The New York office which will service cases arising in New York and New Jersey is scheduled to start this operation February 3, 1958. With the completion of these changes more than half of the Federal employee cases will be handled on a decentralized basis. Since approximately 16 percent of the cases reported to the central office originate in the Washington area it may be said that two-thirds of the caseload is now decentralized.

The field operations in the new locations have not been underway long enough to report the effect of this change. It is anticipated that the change will reflect the same improvement in speeding the adjudication and payment of claims noted in connection with similar operations in the District office at San Francisco initiated 5 years ago. The records for the latter office for the last fiscal year show that more than 83 percent of the new claims were adjudicated and initial payment was made within 1 week from the date of receipt of the claim and more than 88 percent within 2 weeks.

The shift of part of this function from the central office to the field was accomplished without any serious personnel problems. A few employees who would have been surplus due to this shift transferred to other positions in the Depart-

ment and others have been or will be reassigned to fill vacancies occurring within the Bureau. The field offices were staffed so far as possible by experienced Bureau personnel who applied for field assignments and local employees were recruited for positions that could not be filled by personnel in the Department.

Longshoremen's and Harbor Workers' Act Program

This program, unlike the Federal employee's program, does not involve any payments by the Federal Government for compensation benefits. This is an obligation of the employer who must insure his liability with an authorized insurance carrier or qualify as a self-insurer. Moreover, it is a completely decentralized operation conducted through district offices of the Bureau. There are 13 such offices handling claims arising out of maritime employment and from employment outside the United States and on the other Continental Shelf. An additional district office handles claims arising out of private employment in the District of Columbia.

The cost of administration of this program, except for private employment in the District of Columbia, is included in the Bureau's administrative appropriation and represents approximately 26 percent of the total sum in the 1959 budget. The cost of administering the law applicable to employment in the District is paid by the government of the District of Columbia through the transfer of funds to the Bureau for this purpose.

The amendments to the Longshoremen's Act in 1956 resulted in an increase in the number of compensable cases and additional claims work in the district offices. This, coupled with increased activity in covered employment, particularly in the maritime industry, has increased the workload in these offices to the point where an increase in staff is necessary to provide essential services.

The appropriation requested for this operation for 1959 proposes an increase of $81,290 to provide 16 additional positions in 8 field offices. The additional staff consisting of 5 claims examiners and 11 clerical employees will raise the total staff from 86 employees to 102 employees. The distribution of the present and proposed staff is shown on page 20 of the justification.

It is estimated that 93,000 new cases will be received under these laws in 1959 exclusive of District of Columbia cases. The new caseload for the first 6 months of the current year is running at the estimated figure of 89,000 anticipated for the year. The caseload from 1955 to 1958 increased nearly 33 percent and a further increase is expected in 1959. The small staff of 86 employees assigned to this activity cannot efficiently handle this continuing increase in workload.

EXECUTIVE DIRECTION AND MANAGEMENT SERVICES

The sum of $143,810 is proposed for this purpose. This represents the cost of overall direction of the Bureau programs and general administrative management services. The amount requested is substantially the same as for the current year.

LONGSHOREMEN'S REHABILITATION PROGRAM

The proposed administrative appropriation of the Bureau includes an authorization to use $47,400 from the trust fund created by section 44 of the Longshoremen's Compensation Act for rehabilitation services to permanently disabled beneficiaries of that act. This fund is made up of sums paid by employers in certain fatal cases and from fines and penalties.

The amount proposed for 1959 is the same as that authorized for the current year and provides for a staff of seven employees engaged in this rehabilitation service for seriously disabled employees.

WAR CLAIMS ACT PROGRAM

Funds to cover all future costs after June 30, 1957, for administration of benefits authorized by section 4 (c) and 5 (f) of the War Claims Act of 1948 were transferred from the war claims fund to the general fund of the Treasury. The amount requested for this purpose in the Bureau's appropriation for 1959 is in effect an offset against the transferred moneys.

This is largely a liquidating program involving the continued servicing of cases in which liability has been recognized. It will be necessary to service many of these cases for an extended period and to make readjudication from time to time.

The sum of $82,180 allocated for this service in 1959 is substantially the same as that provided in 1958 and will provide for a staff of 14 employees to handle this work.

EMPLOYEES' COMPENSATION FUND

This fund established by section 35 of the Federal Employees' Compensation Act is available for the payment of all benefits provided by that act and for those payable under sections 4 (c) and 5 (f) of the War Claims Act of 1948.

It is estimated that the cost of such benefits in 1959 will amount to $57 million, the major part representing benefits payable for injuries in prior years. Only about two-thirds of the total cost is for benefits payable on account of the injury or death of regular Federal employees; 30 percent of the cost is for the death of military reservists and the remainder is for War Claims Act beneficiaries and miscellaneous groups.

In estimating probable expenditures from the fund during 1959 it has been presumed that Federal Civilian employment will remain at the present level of about 2,300,000 employees and the elimination of coverage for military reservists has been taken into account. On this basis it was anticipated that the 1959 cost will decrease below 1958 expenditures. However, it is necessary to recognize that an increase in the pay of civilian personnel will result in an increase in disability and death compensation in new cases, as the compensation award is based on the pay received by the injured employee at the time of injury.

The estimates are accompanied by more detailed information concerning these programs. I will be glad to supplement this with such further details as the committee may desire.

STATEMENT OF THEODORE M. SCHWARTZ, CHAIRMAN, EMPLOYEES' COMPENSATION APPEALS BOARD, UNITED STATES DEPARTMENT OF LABOR, ON BUDGET ESTIMATES FOR FISCAL YEAR 1959

The Employees' Compensation Appeals Board consists of three members appointed by the Secretary of Labor. It is a quasi-judicial body which was established in 1946, with exclusive jurisdiction to consider and decide appeals by Federal employees from final decisions of the Bureau of Employees' Compensation pursuant to the provisions of the Federal Employees' Compensation Act. The jurisdiction of the Board extends to questions of fact, as well as law, and to questions involving the exercise of discretion based on the case record upon which the Bureau rendered its decision. New evidence may not be submitted to the Board. Appeal is a matter of right, as is the opportunity to appear before the Board and to be heard in oral argument. Procedures are informal and designed to facilitate the presentation of cases. Decisions of the Board are final as to the subject matter appealed.

The Board is requesting an appropriation of $99,000 for the fiscal year 1959, which is $14,400 less than its appropriation for fiscal year 1958 and $20,982 less than the costs for fiscal year 1957. The reduction is the result of elimination of 2 clerical positions, no longer necessary under the Board's revised procedures, and a $9,000 reduction in the request for printing. The publication of the decisions of the Board will be maintained on a current basis. It will be possible to combine the decisions of fiscal 1957 and 1958 into one volume, thus cutting printing costs considerably. Under the Board's revised procedures, attorneys of the Solicitor's Office now draft all of the Board's opinions.

During the past fiscal year the Board succeeded in broadening the distribution of its volumes of decisions. The volumes now are available for reference to anyone who wishes access to the Board's decisions at 180 depository libraries, at the workmen's compensation commission of each State, and at the regional offices of the Bureau of Employees' Compensation. In addition, there has been a limited distribution to various university and law libraries throughout the United States.

The workload data is included in the material submitted to the committee. I appreciate the opportunity of again appearing before this committee and I would be pleased to answer any questions you may have.

AGREEMENT WITH HOUSE ACTION

Mr. McCauley. We have also submitted certain detailed information requested by the subcommittee, and the budget estimate was accompanied by a detailed analysis of the purpose of the appropriations.

The House of Representatives has approved the estimate submitted by the Bureau in the full amount requested and I trust that the material we have already presented to you will cause you to concur in their action.

The overall estimate of the Bureau for this year represents a reduction below the amount appropriated for 1958. This occurs as a result of the elimination of certain items for nonrecurring expenses connected with the decentralization of the Federal employees' program approved by the Congress last year.

We are also asking, as an offset against this reduction, additional funds to enable us to increase our staff in the administration of the Longshoremen's Compensation Act.

ADDITIONAL PERSONNEL REQUESTED

Senator Thye. You are asking for how many additional personnel?

Mr. McCauley. Sixteen additional employees who will all be stationed in the field offices of the Bureau in administrating the Longshoremen's and Harbor Workers' Compensation Act.

Senator Thye. What would be the most pertinent reason in the justification of the increased personnel?

Mr. McCauley. The continued increase in the volume of work occurring under that law. There has been a steady increase from 1955 up to the time the estimates were prepared in the number of new cases reported.

The offices administering this act are quite small. As a matter of fact, 6 of these field offices have a staff of only 3 employees—a deputy commissioner in charge and 2 clerical employees.

We can absorb a certain amount of increase in work without expansion of the staff, but feel that we have reached a point of maximum absorption because of the steady increase in work.

I might also add that the Bureau has no control of the volume of work arising under these programs. It depends entirely on the activity in the operations covered.

Senator Thye. Are there any questions?

Senator Ives. Mr. Chairman, I would like to ask Mr. McCauley one question here. I notice the House cut you by $27,400. Isn't that right?

Mr. McCauley. No, sir; that was our reduction.

Senator Ives. It was your own personal reduction?

Mr. McCauley. Yes, sir.

Senator Ives. That is very nice. I congratulate you.

Senator Thye. All right, if there are no further questions, then that takes care of you.

Mr. McCauley. Thank you very kindly, sir.

Bureau of Labor Statistics

STATEMENT OF EWAN CLAGUE, COMMISSIONER; PHILIP ARNOW, ASSISTANT COMMISSIONER; HENRY J. FITZGERALD, ASSISTANT COMMISSIONER; RICHARD F. JONES, CHIEF, OFFICE OF MANAGEMENT; PAUL R. KERSCHBAUM, CHIEF, OFFICE OF PROGRAM PLANNING; JAMES E. DODSON, ADMINISTRATIVE ASSISTANT SECRETARY, AND V. S. HUDSON, ASSISTANT TO THE ADMINISTRATIVE ASSISTANT SECRETARY; BUREAU OF LABOR STATISTICS

APPROPRIATION ESTIMATE

"Bureau of Labor Statistics

"*SALARIES AND EXPENSES*

"[Salaries and expenses:] For expenses necessary for the work of the Bureau of Labor Statistics, including advances or reimbursement to State, Federal, and local agencies and their employees for services rendered, and not to exceed $15,000 for services as authorized by section 15 of the Act of August 2, 1946 (5 U. S. C. 55a), [$7,200,000] *$7,572,000.*"

Amounts available for obligation

1958 actual appropriation	$7, 200, 000
1959 budget estimate	7, 572, 000
Change requested for 1959	372, 000
House allowance for 1959	7, 332, 000
House change over revised base 1958	+132, 000

Obligations by activities

	Revised base, 1958		Budget estimate, 1959		House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Collection, analysis and publication of labor and economic statistics:						
(*a*) Manpower and employment	284	$2, 491, 896	310	$2, 670, 409	284	$2, 515, 409
(*b*) Prices and cost of living	208	1, 375, 169	226	1, 477, 698	226	1, 477, 698
(*c*) Wages and industrial relations	155	1, 077, 815	155	1, 079, 756	155	1, 079, 756
(*d*) Housing and public construction	51	386, 912	51	387, 558	51	387, 558
(*e*) Measurement of productivity	33	241, 261	47	326, 755	33	241, 755
(*f*) Industrial hazards	38	229, 273	38	229, 677	38	229, 677
(*g*) Foreign labor conditions	13	97, 275	13	97, 484	13	97, 484
2. Central administrative services	95	737, 509	95	738, 593	95	738, 593
3. Executive direction and program coordination	76	562, 890	76	564, 070	76	564, 070
Total	953	7, 200, 000	1, 011	7, 572, 000	971	7, 332, 000

Obligations by objects

	Revised base 1958	Budget estimate 1959	House allowance
SUMMARY OF PERSONAL SERVICES			
Total number permanent positions	953	1,011	971
Full-time equivalent of all other positions	40	40	10
Average number of all employees	976	1,033	994
DIRECT OBLIGATIONS			
Personal services	$5,240,656	$5,529,982	$5,323,578
Travel	283,200	305,124	292,020
Transportation of things	9,000	9,000	9,000
Communication services	192,900	195,735	193,780
Rents and utility services	114,000	115,500	114,000
Printing and reproduction	130,500	150,964	150,930
Other contractual services	817,444	818,334	817,682
Supplies and materials	73,000	77,253	74,320
Equipment	25,000	25,000	25,000
Grants, subsidies, and contributions	307,000	337,808	324,390
Refunds, awards, and indemnities	1,500	1,500	1,500
Taxes and assessments	5,800	5,800	5,800
Total	7,200,000	7,572,000	7,332,000

Summary of changes

	Positions	Amount
1958 actual appropriation	953	$7,200,000
1958 supplemental appropriation		
Transfer to and from		
Total funds available	953	7,200,000
Deduct nonrecurring items		
Revised base 1958	953	7,200,000
1959 budget estimate	1,011	7,572,000
1959 transfers or authorizations requested		
Total requested for 1959	1,011	7,572,000
Change requested for 1959	+58	+372,000

Summary of changes—Continued

	Budget estimate 1959		House allowance	
	Positions	Amount	Positions	Amount
INCREASES				
For mandatory items: Retirement contribution annualization rate of 6.5 percent in 1959 and 6.25 percent in 1958		$12,000		$12,000
Subtotal		12,000		12,000
For program items:				
Printing costs for the 1959 edition of the Occupational Outlook Handbook	None	20,000	None	20,000
Manpower in technical occupations for defense and essential civilian needs	9	55,000	None	None
Development of series on hours worked and nonproduction and supervisory employment and hours of work in manufacturing industries	17	100,000	None	None
Extension of the current price program in the areas of wholesale and retail prices	18	100,000	18	100,000
Extension of productivity to additional industries and sections; short-term measurement of productivity changes	14	85,000	None	None
Subtotal	58	360,000	18	120,000
Total increases	58	372,000	18	132,000
DECREASES				
Decrease	None	None	None	None
Net change	+58	+372,000	+18	+132,000

EFFECT OF HOUSE ACTION

Activity 1 (a). Manpower and employment

House action eliminated 26 positions and $155,000 for this activity. House action would:

1. Eliminate the development of statistics on hours worked by persons employed in each manufacturing and in selected nonmanufacturing industries and of the number of hours for which nonproduction workers in manufacturing industries are paid.

The elimination by the House will prevent the development of productivity trends by industry based on actual hours of work. There has been a consistent demand for such a productivity measure as a companion index to productivity data which are based on total hours for which the employer pays, including such as are allotted for vacations, sick leave, call-in time, etc. An index of productivity based on hours worked is also essential for the development of accurate estimates of labor requirements. In addition, if the BLS were authorized by adequate appropriations to add an hours-worked series to present data on hours paid for, better current analyses could be made of the value of some of the major fringe benefits which are becoming an increasingly large proportion of the wage package.

2. Eliminate funds for estimating manpower requirements for defense production programs. Action will make it impossible to fulfill the Bureau's responsibility to provide essential data on manpower requirements and the balance that must be maintained between civilian and defense needs. The Department of Labor is responsible for the development of data on the supply and the demand for labor generally, and other Government agencies look to the Department for estimates on the requirement for defense production programs and essential civilian needs.

Activity 1 (b). Prices and cost of living

House action approved requested increase of 18 positions and $100,000 for this activity.

Activity 1 (c). Wages and industrial relations

House action approved this activity without change.

Activity 1 (d). Housing and public construction

House action approved this activity without change.

Activity 1 (e). Measurement of Productivity

House action eliminated 14 positions and $85,000 for this activity.

These positions and funds are designed to provide insight into the contributions made by individual industries and industry groups to the overall national productivity trends. To understand broad movements reflecting productivity changes in the entire economy, it is essential to identify factors which either intensify productivity growth or which are responsible for a lag in improved productivity trends. Such investigation must be done at the level of individual industries or industrial groups.

In view of the challenge of the Soviet Union on the technological front, and the increased interest of productivity in assessing changes in our national economy, it is especially important that a more detailed examination be made of the factors influencing productivity developments. The funds requested will enable the Bureau to take the first step toward identifying the industrial sectors which will require further and more careful examination.

Activity 1 (f). Industrial hazards

House action approved this activity without change.

Activity 1 (g). Foreign labor conditions

House action approved this activity without change.

Activity 2. Central administrative services

House action approved this activity without change.

Activity 3. Executive direction and program coordination

House action approved this activity without change.

AMOUNT REQUESTED AND HOUSE ALLOWANCE

Senator THYE. The next item is the Bureau of Labor Statistics.

You may proceed, Mr. Clague.

Mr. CLAGUE. Mr. Chairman, our appropriation for the current fiscal year is $7.2 million. We had requested 58 additional positions and $372,000 additional. The House allowed us $132,000, involving 18 positions. We are appealing the remaining 40 positions and $240,000.

Senator THYE. What is the most important statement that you could make that will justify the increased personnel?

PREPARED STATEMENT

Mr. CLAGUE. I have a general statement, Mr. Chairman, which I would like to file for the record. I think it will touch on the three items that are involved.

(The statement referred to follows:)

STATEMENT OF EWAN CLAGUE, COMMISSIONER, BUREAU OF LABOR STATISTICS

The estimate for the Bureau of Labor Statistics for 1959 totals $7,572,000, an increase of $372,000 over the year 1958. This increase provides for additional work in the following four areas: prices, productivity, employment and hours, and manpower.

PRICES

The increase of $100,000 proposed for the Bureau's price statistics program is designed to improve the quality of our price reports from manufacturers and from retailers, particularly to take account of price discounts and special allowances.

We want, also, to expand and improve our wholesale price program for industrial equipment, machine tools, and other capital goods. We shall have to extend our pricing to business services, including specialized transportation services, insurance, machine rentals, sales agencies, and many other functions carried on as separate business operations.

Many of our measures of economic growth are in dollar terms. The comparison of gross national product in this year's dollars with a year ago in last year's dollars doesn't tell us how much our production has changed in terms of the things people consume. Our indexes are needed to deflate the dollar figure and thus provide a measure of change in the physical volume of production.

The improvement of our price indexes for this purpose was a major recommendation of the National Accounts Review Committee. This Committee's recommendations were the subject of hearings before the Joint Economic Committee on October 30, 1957.

During the past few years, prices have been rising in both wholesale and retail markets. This rise has brought increasing public attention to our price indexes, a reflection of their great usefulness for many purposes. The extent of wage escalation based on the Consumer Price Index, for example, is the greatest that it has ever been. At the same time our problems in the preparation of these indexes have become much more difficult. We are deeply concerned with the problems of pricing, that is, the determination of which prices should be used in our indexes. There was a time in the past when this problem was somewhat simpler. A list price was valid and the price of a commodity or appliance at retail could be accurately established. For several years the whole system of pricing, not only at retail, but also among manufacturers and wholesalers, has become very complicated. Discounts are given by the retailer, but these are not uniform among customers. Trade-in allowances are given, but not on any standard basis.

Another problem area relates to the introduction of quality improvements and their effect on prices. When new models are introduced, sometimes with only minor changes, we have the problem of determining just how to link up prices of last year's model with the new product. On one point there should be no misunderstanding—when it is clear that the price increase is directly related to improvements in a new model, we take that price increase right out. In many cases, however, this is not an easy thing to do; it requires careful study and analysis, and often the information required to do this is not available.

If the requested increase is approved, we can at least make a start toward solving some of these problems.

PRODUCTIVITY

Our request for $85,000 is to expand our program of productivity measurement.

The Bureau has produced some annual statistics of productivity change but they cover very broad segments of the economy, such as total manufacturing and total nonagriculture. We cannot tell why the rate of productivity growth is advancing or slowing down unless we look at more detail. We cannot really understand the productivity of the economy, or measure it effectively, unless we study its parts.

In the long run, gains in output per man-hour are the most important factor in the Nation's economic well-being. At the present time, in the extended discussion now going on concerning prices and wages, the factor of productivity has become of key importance. Better data and more detailed data are needed in order to make clear to labor, to management, and to the general public what is happening to the productivity of the American economy.

EMPLOYMENT AND HOURS OF WORK

For the development of new data on this subject, we are requesting $100,000. For many years the BLS has been collecting information on the number of working hours for which production or nonsupervisory employees get paid in manufacturing and selected nonmanufacturing industries in the United States. These data on the average workweek provide a critical indicator of how our economy is doing.

For some years now, however, there have been three developments which have pointed up the necessity for improving and adding to this information, as recommended by the National Accounts Review Committee.

In the first place, there has been a growing difference between the hours for which a worker gets paid and the hours he actually works, especially with the

extension of paid vacations, holidays, and sick leave. We propose, therefore, to collect information on hours actually worked in addition to hours paid for, which we now get. This will not only give us new data for the first time on actual hours worked, but will also permit the calculation of needed productivity measures on the basis of both hours paid and hours actually worked.

In the second place, the information we now get is confined to production workers. Omitted is the large and growing segment of employment represented by the nonproduction workers—the executives, the engineers and scientists and other white-collar workers. Our proposal calls for the collection of hours of work information—both on a paid for and on an actually worked basis—on this very important segment of our working population.

Finally, the great bulk of our hours information applies to workers in manufacturing industries. While this is a very important part of our economy, it leaves out large blocks of workers in the nonmanufacturing segment where the biggest employment increases have occurred during the postwar period. We therefore propose to extend our collection of hours worked information to important nonmanufacturing industries in the United States.

MANPOWER STUDIES

The Department of Labor has in connection with its manpower work, certain responsibilities for determining whether shortages exist or will arise in key occupations such as sciences, engineering and related technical fields, and for planning programs to develop skilled manpower and to improve its utilization. The Department and other agencies look to the Bureau of Labor Statistics for facts and estimates of future manpower needs.

Additional funds of $55,000 are requested to strengthen the Bureau's program in this area to meet some of the most urgent needs. These data are required for our regular activities, but they also will make it possible to develop procedures and assemble basic facts to aid in estimating the manpower requirements of defense production programs, and to relate these needs to the essential requirements of the civilian economy.

HANDBOOK

An item of $20,000 is requested for the printing next year of the Occupational Outlook Handbook. These funds are needed to publish the next edition of the handbook which will be issued in 1959. This publication is widely used in the high schools and colleges. We have received commendation from the Administrator of the Veterans' Administration, which uses it intensively in its counseling of veterans. The United States Employment Service has placed it in every one of the State employment offices throughout the country. And, furthermore, it is used widely in industry and among labor groups. As an indication of the extent of the demand, the Government Printing Office has already sold over 10,000 copies of the last issue at $4 a copy.

The preparation of this handbook is truly a cooperative venture. While the Bureau of Labor Statistics produces it, we obtain cooperation and contributions not only from other bureaus of the Department of Labor, but also from the Veterans' Administration, which has been a partner in this enterprise for many years, the Department of Agriculture and the Department of Health, Education, and Welfare.

REASON FOR INCREASED NEED

Senator THYE. Why is there the increased need?

Mr. CLAGUE. I would say in general terms there are statistics which are needed by the Council of Economic Advisers, by the Joint Economic Committee of the Congress, by the administration, and to a considerable extent by labor and management, in dealing with the problems that we now face in this country.

We were asking for some more funds to get information on the hours actually worked by employees as distinct from the hours actually paid. As you know, our employment statistics are issued every month. The next report will be coming out next Tuesday.

Senator THYE. In other words, it is a question of employment and the unemployment situation in certain areas of the Nation that has thrown an additional burden upon you?

Mr. CLAGUE. It is not so much different areas. That would be more the Bureau of Employment Security's job. It is different industries and in particular the amount of hours represented by paid vacations, paid holidays, and sick leave and that kind of thing which makes a difference between the hours shown on the payroll by the employer as compared to the hours that were actuolly put in by the employee. There is a distinction there.

Senator THYE. How would that differ this year from the last year or the previous years?

CHANGES UNDER COLLECTIVE BARGAINING CONTRACTS

Mr. CLAGUE. As each year goes by, Mr. Chairman, more and more of these types of benefits are being granted to employees through collective-bargaining contracts.

If you went back several years, say 5 or 6 years or more, you would find that paid holidays might have run 2 or 3 or 4 per year. Now, they are running 6, 7, and 8.

As to paid vacations, many times there were none. Then they moved up to 1 week for a certain length of service. Now, you find 2 weeks and even 3 weeks, so there is a wider and wider gap between the hours actually worked and the hours which are represented by the payroll of the employer.

In fact, we just made a crude estimate and we think that out of about 38½ hours of work shown in manufacturing this last month, probably as much as 2 hours on the average throughout the year is represented by pay for time not worked. It was to get at that question that we wanted these additional funds.

That was just one of the items; it represented approximately $100,000 and 17 positions, as I recall it. Then we had a second item which relates to the manpower problem, and I would like to mention that specifically because the House did cut this out.

CUT IN ACTIVITIES OF DEFENSE MOBILIZATION

They cut it out throughout the Department of Labor request. That had to do with the Office of Defense Mobilization. In our budget here it is an item of 9 positions and $55,000.

The House committee had told the Department that they would not approve any expenditures for the Office of Defense Mobilization, but the Secretary of Labor has authorized us to appeal our particular request because ours is only partly connected or indirectly connected with the Office of Defense Mobilization.

We are concerned with the balance between military needs and civilian needs and the maintenance of a reasonable relationship between them. For example, the Secretary of Labor has just asked us to make an analysis of the effect of the guided missile program upon aircraft employment.

As you may know, in the cutting back of aircraft procurement there has been a drop of possibly 125,000 or 135,000 workers in aircraft manufacturing plants. Now comes along a guided-missile program of some size in which more workers will be employed.

The question is, where will that employment take place, to what extent will it occur in the aircraft industry, in what locations might it occur, and what will the net result be?

I submit that we feel that is a civilian duty which belongs to the Department of Labor, and to our Bureau as the research agency, rather than an Office of Defense Mobilization function.

It is for that reason we feel able to come to you and ask that that be considered as a civilian activity and that funds be granted for that purpose.

REASON FOR HOUSE CUTS

Senator IVES. What was the reason the House cut as much as they did?

Mr. CLAGUE. The House cut out entirely, out of all the bureaus of the department, this particular type of item, on the ground that it was connected with the Office of Defense Mobilization and the House said they ought to pay for it. I have used this illustration to indicate that we in the Bureau of Labor Statistics have a certain type of research duty, of obtaining some results of the impact of defense production, and shifts in defense production, on the civilian economy and on employment, and in this case on unemployment.

Senator IVES. The House cut you $240,000?

Mr. CLAGUE. Yes.

Senator IVES. What reason did they give for doing it?

Mr. CLAGUE. They did not give any reason. This was an increase.

Senator IVES. Well, a $132,000 increase, but a net cut after all, of $240,000.

Mr. CLAGUE. That is right.

Senator IVES. I am just curious to know why they cut that $240,000. That places you below what it was last year.

Mr. CLAGUE. No, no.

Senator IVES. No; that is right.

Senator THYE. You have a plus there.

Mr. CLAGUE. This was additional. They did not give us this money.

Senator THYE. That's right. In other words, you did not get as much as you asked for. You got a raise but not as much as you asked for.

Mr. CLAGUE. That is correct, so that we are asking you for the items that the House did not approve. They did not make any mention of the cut. I do know that on this item we have just been talking about, $55,000, they announced that that was a general principle they were applying everywhere. I am now before you asking that we be made an exception to that principle on the grounds that this work is legitimately civilian activity rather than defense mobilization activity.

MANPOWER FOR HOSPITAL CONSTRUCTION

Mr. DODSON. Senator Thye, this morning the chairman asked the Under Secretary about supplying certain information with regard to hospital construction about the amount of manpower required on site and then the effect of the off site.

Mr. Clague's Bureau will be the one that will get that request and I do not know whether Mr. Clague has indicated here very strongly about the need for this increase he has been talking about of $55,000 that relates to this kind of activity.

He does not know about this request yet, because it was just made this morning.

Mr. CLAGUE. On hospitals?

Mr. DODSON. Yes, sir.

Senator THYE. That could come, however, as a supplement and you could justify it in that manner. He was not aware of it when he was talking about this budget.

Mr. CLAGUE. I can tell you that on roads we can give you a great deal of information. On hospitals our labor-requirements material is pre-World War II. We would be hesitant to issue it.

We could not give precise, accurate reports on employment involved in a million dollars worth of hospital construction at all. The labor requirement on that type of construction has been neglected for years.

(The following statement was later provided:)

The Bureau of Labor Statistics has discontinued making estimates of the amount of employment involved in the construction of hospitals because the information on which such estimates have to be based is obsolete. No studies of labor input on hospital construction have been conducted since 1938.

It is generally assumed that the design of hospitals has changed rather significantly in the last 20 years, and that new materials, methods, and equipment being used now have had a considerable influence on the number of man-hours it takes to build and equip a hospital. The productivity of labor probably has improved in this field as it has in almost all other fields.

A calculation based on data obtained in 1936–38, allowing only for changes in construction costs since then, yields an estimate that $1 million spent for hospitals would involve 140 man-years of labor. This would cover not only the construction work at the building site but, in addition, the work involved in producing the materials and bringing them to the site. It also would include the labor involved in producing and installing the equipment normal to a general hospital. It would not cover the labor involved in producing the equipment used in construction nor any indirect employment that might arise out of wages spent by workers engaged in the construction, or in producing and distributing the materials and equipment that go into the hospital.

This estimate of 140 man-years is undoubtedly too high, but there is no recent information which would enable the Bureau to judge how much too high it is.

Senator THYE. Are there any further questions?

Thank you.

WOMEN'S BUREAU

STATEMENT OF MRS. ALICE K. LEOPOLD, DIRECTOR, WOMEN'S BUREAU, AND ASSISTANT TO THE SECRETARY OF LABOR

APPROPRIATION ESTIMATE

"WOMEN'S BUREAU

"*SALARIES AND EXPENSES*

"[Salaries and expenses:] For expenses necessary for the work of the Women's Bureau, as authorized by the Act of June 5, 1920 (29 U. S. C. 11–16), including purchase of reports and material for informational exhibits, $462,000."

Amounts available for obligation

1958 actual appropriation	$462, 000
1959 budget estimate	462, 000
House allowance for 1959	462, 000

Obligations by activities

	Revised base, 1958		Budget estimate, 1959		House allowance	
	Position	Amount	Position	Amount	Position	Amount
1. Development of programs and materials to improve women's employment opportunities and economic status	23	$165,100	23	$165,100	23	$165,100
2. Advisory services on legislation affecting women workers	9	69,825	9	69,825	9	69,825
3. Executive direction and program coordination	11	102,225	11	102,225	11	102,225
4. Administrative services and management	18	124,850	18	124,850	18	124,850
Total	61	462,000	61	462,000	61	462,000

Obligations by objects

	Revised base, 1958	Budget estimate, 1959	House allowance
Summary of personal services:			
Total number permanent positions	61	61	61
Full-time equivalent of all other positions	1	1	1
Average number of all employees	61	61	61
Direct obligations:			
Personal services	$362,700	$362,700	$362,700
Travel	25,000	24,250	24,250
Transportation of things	1,425	1,425	1,425
Communication services	10,145	10,145	10,145
Printing and reproduction	17,600	17,600	17,600
Other contractual services	20,730	20,730	20,730
Supplies and materials	500	500	500
Equipment	2,300	2,300	2,300
Grants, subsidies, and contributions	21,000	21,750	21,750
Taxes and assessments	600	600	600
Total	462,000	462,000	462,000

Summary of changes

	Positions	Amount
1958 actual appropriation	61	$462,000
1959 budget estimate	61	462,000

	Budget estimate, 1959		House allowance	
	Positions	Amount	Positions	Amount
INCREASES				
For mandatory items:				
Retirement contribution annualization rate of 6.5 percent in 1959 and 6.25 percent in 1958		+$750		+$750
Annualization cost for 4 additional positions allocated for 1958		+4,212		+4,212
Offsets against annualization costs:				
Decrease in temporary and w. a. e. employment		−4,212		−4,212
Decrease in travel		−750		−750
Total				

STATEMENT OF MRS. ALICE K. LEOPOLD, ASSISTANT TO THE SECRETARY OF LABOR AND DIRECTOR, WOMEN'S BUREAU, DEPARTMENT OF LABOR, ON 1959 REQUEST FOR SALARIES AND EXPENSES, WOMEN'S BUREAU

In 1957, the number of women workers again exceeded all previous records, with an average of better than 22 million women in the labor force—3 million more than at the height of World War II. Last October the number reached an all-time high of more than 22¾ million.

During the year 1956—the latest for which figures are available—there were 28 million women who worked some time during the year. Some 10½ million of these women held full-time jobs during the entire year; the remainder worked either part of the year or at part-time jobs. Undoubtedly, 1957 will show a similar picture with slightly higher numbers.

More than one-third of all adult women in the population were working. They filled 1 out of every 3 jobs. Some 2 million women were working in secretarial, stenographic, and typing jobs; about a million were teaching; another half of a million were nurses. Better than 1 million were in high level jobs as managers, officials, and proprietors.

Today, women over 35 years of age are a distinct majority in the labor force. This is reflected in the 40-year average age for women workers and the fact that more than half of all women workers are married. Thus, the "forties" have become the peak ages for women's work outside the home. These are the women whose children are grown and going to school.

Recognition of the importance of women's work to the continued expansion of our economy and to the level of our preparedness found expression in the Women's Bureau program, as well as in public expressions in the press, magazines, etc. The National Manpower Council at Columbia University published the results of its intensive study of women workers in a book called Womanpower. The Women's Bureau had participated in the research and conference discussions held in connection with this study.

We have moved ahead with our earning-opportunities forums for mature women in a number of cities throughout the country, and plan to continue this program into 1959. Also, we are engaged in a number of cooperative projects related to the shortages of nurses and teachers, since we continue to receive reports of new programs for the utilization of mature women and requests for assistance.

Our newest publication, just released, deals with secretaries, stenographers, typists, and other officeworkers.

Next year, we plan to study employment opportunities for women in the manufacture of electronics equipment, women's employment after graduation from college, and also to obtain vocational-training opportunities information for young women. We also expect to develop material on recommended standards for cost-of-living budgets for self-supporting women, to be used in the revision or administration of State minimum-wage orders.

Jointly with the Department of Health, Education, and Welfare, we plan to publish a study of child-care facilities for children of working mothers. We also expect to study automation in a selected industry after we have had the opportunity to review the results of the Bureau of Labor Statistics' studies in 22 plants. In cooperation with the BLS, we shall prepare statements for the Occupational Outlook Handbook on jobs in which women predominate.

We expect to continue our assistance to national organizations, such as Girls' State, and to cooperate with such international organizations as the Status of Women Commission, the Inter-American Commission on Women, and the International Labor Organization.

These are but a few of the program highlights which are described in detail in our budget document. I would like also to mention the field staff, for which the Congress appropriated funds last year. We recruited four extremely capable women last summer, and they have already been in such widely separated parts of the country as Georgia, Texas, Utah, Missouri, Iowa, Indiana, Tennessee, West Virginia, South Carolina, and Wisconsin, where they established contacts with persons whose knowledge or experience will be valuable to us in the development of our programs and studies. We now have the opportunity to keep currently informed about community programs and local conditions related to women's employment and advancement and our materials can be made increasingly useful to many more communities than was previously possible.

Our request for 1959 is for $462,000—the same amount as was appropriated for the current year.

Senator THYE. Mrs. Leopold, you may proceed as you desire.

NO APPEAL FROM HOUSE ACTION

Mrs. LEOPOLD. Mr. Chairman, the Women's Bureau has 61 employees. We are not asking for any more employees. We have a budget of $462,000. We are not asking for any more budget.

We have filed a statement, and if you wish to ask any questions, I am willing to answer them.

Senator THYE. You have no problem?

Mrs. LEOPOLD. I would not go that far.

Senator THYE. You have not presented us with a problem.

Mrs. LEOPOLD. No.

Senator THYE. So, therefore, I have no questions.

Senator IVES. I want to congratulate you on appearing before the House. I see you did not get any cut.

Mrs. LEOPOLD. That is right, Senator. We are very well pleased.

Senator IVES. I think you are deseriving of what you got.

Senator THYE. I have no questions. Thank you.

Mrs. LEOPOLD. Thank you, gentlemen.

WAGE AND HOUR DIVISION

STATEMENT OF CLARENCE T. LUNDQUIST, ACTING ADMINISTRATOR, WAGE AND HOUR DIVISION

APPROPRIATION ESTIMATE

"WAGE AND HOUR DIVISION

"*SALARIES AND EXPENSES*

"[Salaries and expenses:] For expenses necessary for performing the duties imposed by the Fair Labor Standards Act of 1938, as amended, and the Act to provide conditions for the purchase of supplies and the making of contracts by the United States, approved June 30, 1936, as amended (41 U. S. C. 35–45), including reimbursement to State, Federal, and local agencies and their employees for inspection services rendered, and not to exceed $3,000 for expenses of attendance of cooperating officials and consultants at conferences concerned with the work of the Division [$10,600,000] *$10,500,000*."

Amounts available for obligation

1958 actual appropriation	$10, 600, 000
1959 budget estimate	10, 500, 000
Change requested for 1959	−100, 000
House allowance for 1959	10, 500, 000
House change over revised base 1958	−100, 000

Obligations by activities

	Revised base, 1958		Budget estimate, 1959		House allowance	
	Position	Amount	Position	Amount	Position	Amount
1. Promotion of compliance and enforcement	1, 180	$8, 380, 400	1, 140	$8, 384, 900	1, 140	$8, 384, 900
2. Wage standards and determinations	79	717, 500	77	710, 600	77	710, 600
3. Regulations and interpretations	22	137, 800	22	138, 100	22	138, 100
4. Economic analysis and statistics	53	545, 400	53	446, 100	53	446, 100
5. Executive direction and management	22	220, 300	22	220, 800	22	220, 800
6. Central administrative services	83	598, 600	83	599, 500	83	599, 500
Total	1, 439	10, 600, 000	1, 397	10, 500, 000	1, 397	10, 500, 000

Obligations by objects

	Revised base, 1958	Budget estimate, 1959	House allowance
SUMMARY OF PERSONAL SERVICES			
Total number of permanent positions	1,439	1,397	1,397
Full-time equivalent of all other positions	8	8	8
Average number of all employees	1,406	1,365	1,365
DIRECT OBLIGATIONS			
Personal services	$8,207,200	$8,199,700	$8,199,700
Travel	930,000	918,000	918,000
Transportation of things	27,000	27,000	27,000
Communication services	123,000	123,000	123,000
Rents and utility services	25,000	25,000	25,000
Printing and reproduction	54,000	54,000	54,000
Other contractual services	687,900	587,900	587,900
Supplies and materials	30,000	30,000	30,000
Equipment	15,000	15,000	15,000
Grants, subsidies, and contributions	498,500	518,000	518,000
Taxes and assessments	2,400	2,400	2,400
Total	10,600,000	10,500,000	10,500,000

Summary of changes

	Positions	Amount
1958 actual appropriation	1,439	$10,600,000
1959 budget estimate	1,397	10,500,000
Change requested for 1959	−42	−100,000

	Budget estimate 1959		House allowance	
	Positions	Amount	Positions	Amount
INCREASES				
For mandatory items:				
Retirement contribution annualization rate of 6.5 percent in 1959 and 6.25 percent in 1958		$19,500		$19,500
Regulated investigator promotion costs		200,700		200,700
Offsets against annualization and other costs:				
Reduction in learner program	−2	−7,500	−2	−7,500
Reduction in travel		−12,000		−12,000
Reduction in promotion of compliance and enforcement	−40	−200,700	−40	−200,700
Total increases	−42		−42	
DECREASES				
Reduction in wage surveys related to study of economic effects of minimum wages	None	100,000	None	100,000
Total decreases	None	100,000	None	100,000
Net change	−42	−100,000	−42	−100,000

Statement of Clarence T. Lundquist, Acting Administrator, Wage and Hour Division, Before the Senate Appropriations Committee

Mr. Chairman and members of the committee, last year, the committee was informed that we had worked into our regular enforcement program several important projects. They were to provide information on the nature and extent of the enforcement problem and to test new investigation techniques. These projects have been completed. Two major conclusions have been drawn from the results. First, too small a proportion of underpayments due to noncompliance with the FLSA have been discovered and corrected. Second, a redirection of the

investigation program and institution of improved techniques for more effective use of our investigative staff will reduce the amount of noncompliance.

We are requesting funds to continue in fiscal year 1959 about the same level of program provided by this year's appropriation. Our appropriation for 1958 was $10.6 million. For 1959, we are requesting $10.5 million. Of the total, about $8.4 million will be obligated for promotion of compliance and enforcement. Although this amount is about the same as for 1958, the number of positions allocated to this activity will be reduced, from 1,180 to 1,140. This reduction is made necessary by an increase in average salary cost because of the advancement of investigator trainees to the journeyman level, and a revision in the grade structure for wage and hour investigator positions, involving, among other things, a change in the grade of the journeyman class from GS–9 to GS–11. This revision resulted from a comparative study of the difficulty of wage and hour investigation work with that of other investigator-type positions within and outside the Department of Labor. The new grade structure was indicated by this study and is consistent with grades of other investigative positions in other agencies.

In supporting the request for $10.5 million, I would like to comment on 3 subjects. First, I would like to present a brief summary of the results of our activities during the past year. Second, I want to outline the most important of the findings and conclusions drawn from the special studies carried out in 1957. Third, I would like to indicate our plans for redirection of the enforcement program and for improving the efficiency of investigation procedures.

ACTIVITIES IN FISCAL YEAR 1957 AND FIRST HALF OF FISCAL YEAR 1958

In 1957 we investigated 48,482 establishments, the largest number investigated in any year since 1944. The amount of back wages found due was nearly $19 million, an amount larger than for any year since 1946, and 70 percent greater than for fiscal year 1956. The number of employees underpaid was 182,000, an increase of 61 percent over the number for 1956. The increases over 1956 in the amount of back wages found due and the number of employees underpaid is more than twice the increase in the available investigator staff, which was about 30 percent.

Of the back wages found due, about $5.3 million were minimum wage underpayments, and $13.5 million were overtime underpayments.

There is no evidence that there has been a decrease in the extent of underpayment since 1957. The investigations made in the first 8 months of fiscal year 1958 show a somewhat greater magnitude of underpayments. For the 8-month period, a total of about $13 million was found due, $4 million under the minimum wage provisions and $9 million under the overtime provisions. Another indication of the continuation of extensive noncompliance is the trend in the inflow of complaints. During the first 8 months of fiscal year 1958, 6,400 complaints were received, about the same rate as for the latter half of 1957.

The expanding program for annual review of minimum wage rates in Puerto Rico and the Virgin Islands is proceeding on schedule. During fiscal year 1957, 99 separate rates were set covering all of the industries of the islands; 17 of these rates provided a minimum of $1 an hour.

At the end of the fiscal year 1957, an industry committee met to set the first minimum wages for American Samoa. Another committee will be appointed later in this fiscal year to review the initial rates.

Amendments to the Fair Labor Standards Act which were adopted in August 1957 also required an increase in the Division's program obligations. We conducted an intensive information program to acquaint employers of Guam, Wake Island, and the Canal Zone with their responsibilities under the amended act. We worked with the Defense Department in developing new contracts which are consistent with the requirements of the act. Plans for enforcing the act in the overseas areas have been developed and are being executed currently. The costs of administering the program made necessary by the amendments of 1957 are being absorbed.

The level of the Public Contracts Act wage determination program has been expanded from 5 determinations to 7 each year.

The last of the fieldwork for the 3-year program of studies of the effects of the $1 minimum will be completed by the end of the current fiscal year. A summary report on the results of all of the studies is scheduled for completion during the first quarter of fiscal year 1959. The major project in connection with studies of the economic effects of minimum wages planned for 1959 is a wage distribution study of manufacturing and wholesale trade, to obtain data on the current wage structure of these industries.

Information on the economic effects of Puerto Rican wage orders will also be obtained in fiscal year 1959.

These data, coupled with results of the studies of the effects of the $1 minimum, will provide a basis for carrying out the responsibilities of the Secretary of Labor under section 4 (d) of the Fair Labor Standards Act, to evaluate and appraise each year the minimum wages established by the act and to make such recommendations for future legislation as may be appropriate.

Results of special projects conducted in fiscal year 1957 compliance survey

The most important of the special projects conducted last year was the sample survey to determine the extent and nature of noncompliance with the Fair Labor Standards Act. This survey covered all industries generally subject to the act except construction, railroads and business services. A detailed report on the results of the survey has been prepared, and copies have been made available to the committee. I would like to indicate briefly just a few of the most important findings.

The survey results provide a basis for estimating the extent of underpayment which would have been disclosed had all establishments of the industries surveyed been investigated in 1957: (1) A quarter of a million covered employees were paid less than the minimum wage, and minimum wage underpayments amounted to $19 million; (2) a total of 600,000 employees were underpaid under the overtime provisions, and the amount of underpayment involved was $64.1 million.

Thus, in the industries surveyed the total amount due as of 1957 was $83 million. Now let us relate this estimate of the total amount of underpayment to the amount of underpayment disclosed by the investigations which were made in fiscal year 1957. The investigations made during the year in the industries surveyed disclosed only $15.2 million in underpayments, or less than one-fifth of the estimated total of $83 million.

The compliance-survey findings relate only to the amounts due as of the time of the compliance survey, that is, amounts due because of underpayments occurring within the preceding 2 years. By this time, the 2-year statute of limitations has run against roughly half of these underpayments so that the amounts once legally due employees are irrevocably lost to them. Since the time of the survey, other violations have begun to occur, in new firms which were not in existence at the time of the survey and in old firms because of economic pressure, carelessness, or even willful disregard of the law.

In addition to providing information on the extent of noncompliance, the survey provides a basis for developing more reliable estimates of coverage under the Fair Labor Standards Act. Our new estimate of the number of establishments with employees subject to the act is 904,000, an increase of 100,000 over our previous estimates.

Another important result of the compliance survey is a conclusive showing that an establishment-violation ratio is not the best indicator of the extent of noncompliance. This ratio, the proportion of establishments found with violations, whether of a minor or serious nature, has been a key concept in the Division's statistical presentations. But the survey shows that this ratio is not a good single indicator of the extent of noncompliance. For example, there is little significant variation between establishment-violation ratios for nonmetropolitan and metropolitan areas, but the percentage of employees underpaid is much larger for nonmetropolitan than for metropolitan areas. Reliance on establishment-violation ratios in planning investigation programs has not produced the best possible results. The number of employees underpaid and the amount of underpayment measure more directly compliance results achieved with expenditure of manpower. Henceforth these types of statistics will be used as key figures for planning purposes and as a basis for evaluating accomplishments.

Mail questionnaire pilot test

This test was made to evaluate a proposal that a mail questionnaire be used to identify establishments which are probably in compliance. If the proposal were sound, we could reduce the amount of investigator time spent in establishments which are in compliance. The questionnaire designed for the test requested the employer to supply information about the nature of his business and the relationship of his activities to interstate commerce. It also requested payroll data relating directly to compliance with requirements of the Fair Labor Standards Act. A followup investigation was made of a sample of employers who submitted completed forms to determine the relationship between the actual compliance status of the employer and the compliance status that was suggested by the completed

form. These were regular investigations, involving a visit to the plant, examination of records, and employee interviews.

The findings on investigation indicated that the questionnaire did not provide any basis for segregating establishments in compliance from those in violation. Many violations were found in establishments whose completed questionnaires indicated probable compliance. The test showed that there is no substitute for a physical investigation to determine the compliance status of an establishment.

Compliance-check pilot test

A second project carried out in fiscal year 1957 was the compliance check pilot test. This pilot study was conducted to find out to what extent investigators can determine, after spending only a minimum amount of time in an establishment where no serious violations are occurring, that the establishment is in compliance or substantially in compliance with the Fair Labor Standards Act. The hypothesis underlying the compliance-check technique is that investigators can detect situations in which substantial violations are not occurring without going through the procedures required by a detailed investigation. After an evaluation of the results of this test, we concluded that the use of an improved abbreviated investigation procedure would result in a reduction in the amount of time spent in establishments which are substantially in compliance without overlooking serious violations. We have not as yet adopted any formalized abbreviated procedure pending further study of this problem. However, the results of the test enabled us immediately to make a number of changes in investigation and reporting instructions which we think will result in a more efficient use of time in investigating establishments which are substantially in compliance, thus freeing time which can be devoted to investigations in establishments where serious violations are occurring.

REDIRECTION OF INVESTIGATION ACTIVITIES

On the basis of the results of the special studies and of a review of previous enforcement operations and their results, we are redirecting our efforts so as to make more effective use of staff. We want to reduce the gap between the total amount of existing underpayments and the amount of underpayments disclosed by our investigations. We will continue vigorous enforcement of the child-labor provisions and the Public Contracts Act's safety and health provisions, and see to it that the terms of learner and other special certificates are complied with.

We have not found any way of determining whether any particular establishment is complying with the acts without sending an investigator to it. The compliance survey and findings in investigations made in the past point to categories of establishments in which investigations will probably disclose a relatively great extent of underpayments. The efficacy of our enforcement activities depends in part on the extent to which we can identify such groupings of establishments and concentrate investigation activity in them. To the extent that we concentrate investigations in such groups of establishments, we will be using a larger proportion of investigator time in establishments where serious violations are occurring.

Although we now have better statistical information on areas of extensive noncompliance, the statistical data are not sufficiently detailed to provide a complete basis for planning the most effective investigation program. Much detailed information has been obtained by the field staff of the divisions through first-hand experience. To make possible the full utilization of all information available to the agency, we furnished the field staff with the results of the compliance survey and statistical data on the results of investigations made in previous years. The field staff developed individual programs for each of the 78 field-office areas of the country.

The investigation programs planned in previous years were intended to direct some enforcement activity into all industries and areas and, within each region, to concentrate investigations in industries in which a high proportion of establishments were found to be in violation during previous periods. As I indicated earlier, the establishment-violation ratio is not the most useful measuring device. Also, the compliance survey indicates that industry classification is only one of several factors related to the incidence of violations.

Our new programs take into consideration many factors related to the incidence of violation other than industry classification. The basic objective is to direct investigator time to categories of establishments in which the amount of underpayment and the proportion of employees underpaid are believed to be high. Attention is also given to spreading each program over all types of establish-

ments in which special enforcement problems are encountered. Provision is made for investigation of the anticipated number of complaints, and for investigation of firms awarded public contracts, holders of learner certificates, new firms, employers of homeworkers, and establishments previously found to have committed extensive violations. The program for each field-office area is directed to the special compliance problems of that area, including special provision for investigations in industry segments, narrow geographic areas, and other pockets of noncompliance encountered by that field office.

We will obtain statistics on the results of investigations made under each phase of each of the field programs. These results will be related to the amount of investigator time used, and will be measured in terms of disclosure of amounts of underpayment, numbers of underpaid employees, and numbers of minors illegally employed. These data will provide a basis for periodic review and revision of programs, looking toward most efficient utilization of staff.

We have made a number of changes in investigation techniques which we hope will reduce the amount of time spent on investigations, especially in establishments where no serious compliance problems exist. We are attempting to reduce to a minimum the amount of time spent in reporting findings on investigations. In revising the instructions for making investigations, we have also placed emphasis on the finding of significant violations and have discouraged the spending of investigator time in searching for minor technical violations.

One of the findings of the compliance survey was that, although the extent of violation in large cities is still quite large, violations are much more widespread in nonmetropolitan areas. The new enforcement programs will place more emphasis on getting to establishments outside of metropolitan areas. This new emphasis will be facilitated by our program for decentralizing the investigator staff. This decentralization policy has been implemented through the establishment of new itinerant stations, manned by one or more investigators. The number of itinerant stations has been increased from 111 in fiscal year 1956 to 223 in fiscal year 1958. During fiscal year 1959 it is planned to continue this program, so that the number of investigators at itinerant stations will be raised from 40 percent to 50 percent of the total investigation staff.

Our information program will be continued, to inform employers of their obligations and employees of their rights under the acts. This program aids both in getting the maximum possible degree of voluntary compliance, and in exposing areas of continued noncompliance where stepped-up enforcement activity is needed.

In concluding, I would like to state that I consider the present level of our enforcement activity to be extremely modest. It will provide for investigation of only 6 percent of the establishments covered by the Fair Labor Standards Act. This, in my opinion, is a minimal program effort in view of the extent of noncompliance which we now know exists.

ABSORPTION OF COSTS

Senator THYE. Mr. Lundquist, you may proceed.

Mr. LUNDQUIST. Thank you.

Mr. Chairman, our budget request is, in fact, $100,000 less than we received for this current fiscal year. It is at a figure of $10.5 millions. This will, in fact, result in a reduction of the number of positions from 1,439 to 1,397. This reduction of 42 positions is related to the fact that we are absorbing certain costs resulting from a regrading of our journeyman investigator grade from GS–9 to GS–11.

We are operating currently on the basis of approximately 48,000 investigations per year. This is the most number of investigations we have made since 1944. We think we can do an adequate job this year with the appropriations requested.

We have a survey that was made in fiscal year 1957 which we called a compliance survey. We have not had an opportunity to evaluate fully our investigative results this year under the compliance-survey

data, but we think by next year we will have a better picture of our total compliance problem, and next year we will be in a better position to determine precisely what our needs are.

Currently, as I say, we have a budget which we think will provide an adequate measure of enforcement in fiscal year 1959.

Senator THYE. Are there any complaints against your Division that you are not enforcing?

Mr. LUNDQUIST. None that I know, sir. We are going into those areas where complaints are given to us and, of course, investigations are made of many firms where no complaints are, in fact, lodged.

Senator THYE. Any questions, Senator Ives?

Senator IVES. No.

Senator THYE. Thank you, sir.

Senator THYE. We will now recess to resume at 10 on Thursday.

(Thereupon, at 3:20 p. m., Tuesday, April 1, 1958, the subcommittee recessed, to reconvene on Thursday, April 3, 1958, at 10 a. m.)

LABOR—HEALTH, EDUCATION, AND WELFARE APPROPRIATIONS, 1959

THURSDAY, APRIL 3, 1958

UNITED STATES SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D. C.

The subcommittee met at 10 a. m., pursuant to notice, in room F-39, the Capitol, Hon. Lister Hill (chairman of the subcommittee) presiding.

Present: Senators Hill, Thye, Smith, Potter, and Ives.

RAILROAD RETIREMENT BOARD

STATEMENTS OF HOWARD W. HABERMEYER, CHAIRMAN; HORACE W. HARPER, MEMBER; THOMAS M. HEALY, MEMBER; FRANK J. McKENNA, CHIEF EXECUTIVE OFFICER; AND MICHAEL HUDISIN, DIRECTOR OF BUDGET AND FISCAL OPERATIONS

GENERAL STATEMENT

Senator HILL. The committee will kindly come to order.

Mr. Habermeyer, will you and the members of the Board please come around here, sir.

We are glad to have you gentlemen of the Railroad Retirement Board before us this morning. We welcome you again. We will be happy to have you proceed again in your own way.

APPROPRIATION ESTIMATE

"LIMITATION ON SALARIES AND EXPENSES

"[Salaries and expenses, Railroad Retirement Board (trust fund):] For expenses necessary for the Railroad Retirement Board, including [not to exceed $1,000 for] expenses of attendance at meetings concerned with the work of the Board, when specifically authorized by the Board; stenographic reporting services as authorized by section 15 of the Act of August 2, 1946 (5 U. S. C. 55a); and uniforms or allowances therefor, as authorized by the Act of September 1, 1954 (68 Stat. 1114); [$8,150,000] *$8,450,000*, to be derived from the railroad retirement account."

Program and financing

	1957 actual	1958 estimate	1959 estimate
Program by activities:			
1. Maintenance of earnings accounts	$412,510	$454,058	$445,164
2. Processing claims	5,329,372	5,782,077	6,030,939
3. Maintenance of beneficiary rolls	841,682	904,051	962,253
4. Hearings and appeals	45,960	44,935	45,035
5. Actuarial services	122,718	158,256	152,000
6. Administration	699,501	806,623	814,609
Total obligations	7,451,743	8,150,000	8,450,000
Financing: Unobligated balance no longer available	148,257		
Limitation	7,600,000	8,150,000	8,450,000

Object classification

	1957 actual	1958 estimate	1959 estimate
Total number of permanent positions	1,464	1,437	1,440
Full-time equivalent of all other positions	26	20	26
Average number of all employees	1,231	1,331	1,359
Number of employees at end of year	1,331	1,358	1,390
Average GS grade and salary	6.0 $4,616	6.0 $4,677	6.1 $4,683
01 Personal services:			
Permanent positions	$5,590,733	$6,122,623	$6,249,125
Positions other than permanent	81,070	62,353	81,732
Other personal services	343,333	98,953	132,566
Total personal services	6,015,136	6,283,929	6,463,423
02 Travel	196,747	216,946	249,848
03 Transportation of things	14,742	14,742	14,742
04 Communication services	50,676	51,295	51,305
Penalty mail costs	295,564	313,500	324,000
05 Rents and utility services	400,143	423,015	435,851
06 Printing and reproduction	46,594	58,417	64,590
07 Other contractual services	119,832	128,125	139,244
Services performed by other agencies	90,944	107,604	111,053
08 Supplies and materials	117,952	120,282	120,354
09 Equipment	98,453	41,306	61,111
11 Grants, subsidies, and contributions	----------	384,093	407,514
13 Refunds, awards, and indemnities	2,564	4,307	4,506
15 Taxes and assessments	2,396	2,439	2,459
Total obligations	7,451,743	8,150,000	8,450,000

PREPARED STATEMENT

Mr. HABERMEYER. Mr. Chairman and members of the committee, I have a prepared statement, but in the interest of saving time if it is permissible we will place that in the record.

Senator HILL. You may put that in the record and make any statement you see fit.

Mr. HABERMEYER. Thank you.

(The statement referred to follows:)

Mr. Chairman and members of the committee, the Railroad Retirement Board is an independent agency in the executive branch of the Federal Government. It administers the Railroad Retirement Act and the Railroad Unemployment Insurance Act which provide a system of social insurance for railroad employees and their families.

The Board is administered by three members appointed by the President, by and with the advice and consent of the Senate. One of the three members of the Board represents railroad management, whose tax payments account for 50 percent of the funds for the maintenance of the retirement system and 100 percent of the funds for maintenance of the unemployment system. Another member represents railroad labor, whose payments account for the remaining 50 percent of the cost of the retirement system. The third member, who is the Chairman, represents neither railroad management nor labor and shall not be in the employment of or be pecuniarily or otherwise interested in any carrier or organization of employees.

Under the Railroad Retirement Act, benefits are paid to aged and permanently disabled employees and their wives, and to the widows, widowers, children and dependent parents of deceased employees. Under the Railroad Unemployment Insurance Act, payments are made to workers who are unemployed, sick, or temporarily disabled.

At the end of December 1957, approximately 691,000 persons were being paid annuities under the Railroad Retirement Act, including 340,000 retired employees, 122,000 wives of retired employees, and 229,000 widows, children, and parents of deceased employees. Payments were being made at the rate of more than $59 million a month. Under the Railroad Unemployment Insurance Act, 351,000 employees were paid $133 million in benefits during fiscal year 1957.

The Board also maintains records of wages and service for approximately 10 million persons who have worked in the railroad industry at some time since 1937.

During 1957, service and earnings were recorded for approximately 1.6 million employees. The railroad industry, as covered by the Railroad Retirement and Railroad Unemployment Insurance Acts, includes all railroad, express, and sleeping-car companies subject to part I of the Interstate Commerce Act and, and, in addition, companies affiliated with such carriers and certain railroad associations.

To all intents and purposes, the railroad retirement and unemployment insurance systems are self-sustaining. Our funds for paying benefits and for administrative costs come from trust funds established by taxes paid by railroads and railroad employees.

The costs of the railroad retirement system are financed by means of a payroll tax on each employee's earnings up to $350 a month. The taxes under the Railroad Retirement Tax Act are collected at the rate of 6¼ percent in equal shares from employers and employees by the Internal Revenue Service and are deposited in the general funds of the United States Treasury. The Secretary of the Treasury then transfers to the railroad retirement account (a trust fund) the actual amount of taxes as they are covered into the Treasury during the year.

Funds in the railroad retirement account not immediately needed for benefit payments or administration are invested principally in special 3-percent Treasury notes. The interest earned on these notes is added to the reserve in the railroad retirement account.

Taxes were first collected under the Railroad Retirement Tax Act in 1937. The initial rate was 2¾ percent, but it has progressed to the present maximum rate of 6¼ percent. This rate applies to employees and employers alike.

Funds for operating the unemployment and sickness benefit system come from contributions collected by the Board directly from employers only. No contributions are made by employees. Unemployment contributions are permanently appropriated to the Board by the Railroad Unemployment Insurance Act.

The original act provided for a 3-percent-contribution rate on each employee's earnings up to $300 a month. In 1948, however, the rate was placed on a sliding scale ranging from one-half percent to 3 percent, the rate for any year depending upon the balance in the railroad unemployment insurance account (a trust fund) at the end of the preceding September. The taxable compensation base was increased from $300 to $350 a month, effective July 1, 1954.

Of the annual contributions, an amount equal to 0.2 percent of the taxable payroll is set aside to cover administrative expenses; the rest goes into the unemployment insurance trust account for the purpose of paying benefits. However, any amount in excess of $6 million remaining in the administrative fund at the end of a fiscal year is transferred to the benefit account. These transfers have totaled $106 million since the beginning of the system. Funds in the account which are not needed immediately are deposited in the United States Treasury, and the interest earned on them provides an additional source of income to the system.

The Board requests an appropriation of $8,450,000 to cover the administrative expenses of the railroad retirement system for fiscal year 1959. This request for funds to administer the railroad retirement system is not a request for an appropriation from general funds of the Treasury. Rather it is a request to transfer money from one trust fund to another, and, as such, has no effect on the total amount of the Federal budget.

The increase of $300,000 from the $8,150,000 appropriated for 1958 to the $8,450,000 requested for 1959 is required because of various increases in workloads, including an estimated increase in claims dispositions from 140,200 in 1958 to 147,800 in 1959. The increase in claims receipts from 1958 to 1959 results from the further maturing of the program and from the greater number of claims reopenings that stem from the enactment in fiscal year 1957 of amendments to the Railroad Retirement Act and the Social Security Act. Primarily as a result of the carryover from 1957 to 1958 of work relating to the establishment of disability freeze periods, for which no provision was made in the 1958 appropriation, it will not be possible to reduce pending claims loads from present high levels until 1959.

Actually, there is some concern that the estimates of claims receipts are unduly conservative for both 1958 and 1959. The number of railroad employees who have met the dual requirement for age retirement—age 65 and 10 years of service—is at the very high level of more than 100,000 individuals. Many of them are finding it increasingly difficult to postpone retirement. Changes in economic conditions that have developed since the preparation of these appropriation estimates, as evidenced by the heavy unemployment in the railroad industry, are bringing about a substantial acceleration in retirement.

The appropriation request of $8,450,000 for fiscal year 1959 contributes further to the Board's record of achievement in increasing the efficiency and economy of operations year by year. Notwithstanding the complexities introduced into the claims adjudication processes by recent amendments to the Railroad Retirement Act and various uncontrollable increases in expenses, administrative costs will represent only 1.12 cents out of each dollar spent under the railroad retirement system in 1959.

We believe our request represents a reasonable estimate of the minimum requirements to handle the continuing expansion in the railroad retirement system in an efficient and economical manner and still provide the service to which railroad workers and their families are entitled.

In addition to Mr. Harper, the labor member, and Mr. Healy, the management member of the Board, we have with us Mr. Frank J. McKenna, the Chief Executive Officer, and Mr. Michael Rudisin, the Director of Budget and Fiscal Operations, who are prepared to answer any questions which the members of the committee may wish to ask.

SCOPE OF BOARD

Mr. HABERMEYER. I would like to summarize briefly that the the Railroad Retirement Board is an independent agency of the Federal Government. It administers two acts, the Railroad Retirement Act and the Railroad Unemployment Insurance Act, which provide a system of benefits for railroad employees in the form of retirement annuities, survivor benefits, unemployment insurance benefits, sickness benefits and maternity benefits.

PRESENT BENEFIT PROGRAM

At the present time the Board is paying under the retirement program about 696,000 people benefits in excess of $60 million a month.

Currently we are paying about 149,000 people unemployment benefits that are aggregating about $5½ million a week.

We are paying sickness benefits costing about $1 million a week, and maternity benefits that are costing something under $100,000 a week.

I think probably, in the interest of saving time, if we go to page 8 of our presentation, our budget this year does not differ substantially from the budget we presented last year.

AMOUNT REQUESTED

For this fiscal year we were allowed $8,150,000 for administrative expenses. For next year we are making a request for $8,450,000.

The increase of the $300,000 we are requesting for the ensuing year, is made up generally if increases as detailed on page 8. Substantially all of the increase is due to higher workload which accounts for about $273,465 of the increase.

We anticipate our workload will increase from 140,200 this year to 147,800 next year.

In addition to that there are minor increases such as $23,421 we will have to pay into the civil-service retirement fund. This is due primarily to an increase in personnel and the extra pay period we will have next year.

We are replacing some of our old wornout equipment which will cost us an additional $19,805.

We would like to get back into the exchange of personnel-training program between the field and headquarters offices which we have

pursued over the years. Last year we had to drop it because of a shortage of funds. That would cost about $24,000.

Other than that the amounts are rather small and I think speak pretty much for themselves.

We were very happy with the treatment that the House Appropriations Committee gave us with respect to the funds for administrative purposes. I am sure the Board will be very happy to answer any questions that this committee might have with respect to our budget.

Senator HILL. The House allowed you the full budget estimate which you requested which is $8,450,000.

Mr. HABERMEYER. Yes, sir.

Senator HILL. That entire amount comes out of the trust fund, none out of the Treasury; is that correct?

Mr. HABERMEYER. That is right, sir.

TRUST FUND LEGISLATION NEEDED

Senator HILL. We will not get into that here because this is Senate appropriations, but both Senator Ives and I happen to be members of the Legislative Committee. I am sure that he will agree with me there are certain amendments needed there with regard to the increasing fund coming out of the trust fund.

Mr. HABERMEYER. Yes, sir; we are deficient at the present time.

Senator HILL. You do need additional legislation to meet that deficiency and properly safeguard your trust fund?

Mr. HABERMEYER. Yes, sir; the Board is unanimous in recommending that something be done in order to take care of that situation.

FINANCIAL OPERATIONS

Senator HILL. I wish you would submit to the committee a table showing the receipts, the disbursements, and the balance in the trust fund by fiscal year, similar to that which you have customarily supplied us.

(The table referred to follows:)

Financial operations under the Railroad Retirement Act, by fiscal years 1938–57

Fiscal year	Appropriation account		Railroad retirement account					
			Receipts					
	Appropriation	Balance at end of period	Transfers from appropriation	Interest and profits on investments	Total	Net transfer to administrative appropriations	Net disbursements	Unexpended balance [1]
Total through June—								
1938	$146,500,000	$93,692	$146,406,308	$1,410,822	$147,817,130		$86,915,395	$60,901,735
1939	118,250,000	11,250,000	107,093,692	2,201,877	109,295,569		107,500,993	62,696,311
1940	120,150,000	10,750,000	120,650,000	2,282,516	122,932,516		113,950,513	71,678,314
1941	122,600,000		133,350,000	2,533,858	135,883,858	[2] −$9,000,000	121,744,371	76,817,801
1942	140,850,000		140,850,000	3,143,059	143,993,059		126,671,143	94,139,717
1943	214,801,000		214,801,000	5,776,849	220,577,849		130,863,977	183,853,589
1944	262,720,000		262,720,000	9,837,049	272,557,049		135,215,326	321,195,313
1945	308,817,000		308,817,000	15,240,493	324,057,493		142,527,642	502,725,164
1946	291,913,000		291,913,000	19,881,329	311,794,329	[2]+230,000	153,815,252	660,934,240
1947	298,233,000		298,233,000	24,187,274	322,420,274		173,101,153	810,253,361
1948	758,488,000		758,488,000	38,875,492	797,363,492	[2]+499	224,871,297	1,382,746,054
1949	626,459,000	52,000,000	574,459,000	50,942,877	625,401,877	[2]−4	283,052,033	1,725,095,898
1950	687,000,000	156,167,276	582,832,724	62,201,104	645,033,828	−5,104,000	301,542,273	2,063,483,449
1951	490,832,724	39,008,951	607,991,049	70,167,150	678,158,199	−5,279,000	317,101,022	2,419,261,626
1952	750,834,228	19,181,151	770,662,028	78,889,299	849,551,326	−5,691,400	394,152,798	2,868,968,754
1953	654,699,111	18,656,682	655,223,580	89,295,185	744,518,765	−6,077,161	460,396,560	3,147,013,798
1954	619,218,103	0	637,874,785	98,662,311	736,537,095	−6,080,029	523,765,656	3,353,705,209
1955	599,992,665	0	599,992,665	101,009,841	701,002,506	−5,967,049	566,634,013	3,482,106,653
1956	630,905,625	0	630,905,625	105,011,347	735,916,972	−6,984,063	605,897,222	3,605,142,339
1957	617,235,217	0	617,235,217	106,656,703	723,891,920	−7,480,690	679,609,696	3,641,943,874
Total	8,460,498,671	0	8,460,498,671	888,206,435	9,348,705,106	−57,432,897	5,649,328,335	3,641,943,874

[1] Excludes the unexpended remainder of transfers to administrative appropriations.

[2] Represents transfers to or from appropriation for acquisition of service and compensation prior to Jan. 1, 1937.

HEARINGS ON AMENDMENTS

Senator IVES. Mr. Chairman, may I ask a question?

Senator HILL. Certainly.

Senator IVES. Have you attended the hearings being held on that yet?

Mr. HABERMEYER. Yes, sir.

Senator IVES. You have stated your case before the subcommittee?

Mr. HABERMEYER. Yes, sir.

Senator IVES. I am a member of that subcommittee, but I could not attend there because of another committee meeting. I have no other questions, Mr. Chairman.

EFFECT OF BUDGET CUT ON WORKLOAD

Senator HILL. I note that you also requested of the Budget Bureau $110,000 more than you were allowed, in other words, $110,000 more than the $8,450,000. What was the $110,000 for?

Mr. HABERMEYER. The $110,000 that the Bureau of the Budget cut the Board was a difference of opinion regarding workload figures. We acceded to their request that the $110,000 be eliminated. However, as things look at the present time, our workloads are going to be up to the figures we presented rather than the ones we accepted from the Bureau of the Budget, but we are going to do everything we can to stay within the $8,450,000 they allowed.

It is going to be a very close proposition and we are going to have to be very careful, but I am hopeful we will be able to operate within the $8,450,000.

Senator HILL. You are hoping you can operate within the $8,450,000?

Mr. HABERMEYER. Yes, sir.

HOUSE REPORT

Senator HILL. Now I noticed in the House report some discussion of the question of appropriations for military service credits. I think we have had that matter before us now for several years.

I would like you to take a few minutes to give us the status of that matter and give us just what the situation is with reference to these service credits.

Mr. HABERMEYER. Yes, sir. This is a question of long standing. I think the question first became serious as far as the Board is concerned about 1949. I should go back and say that the Congress enacted a provision in our law, section 4 (n), that established a basis for granting credits to men in military service. The amendment says in effect that a railroadman going into military service will not lose credits under the retirement system by virtue of the fact that he serves in the military.

The amendment goes further and says for each month that the man serves in military service the Railroad Retirement Board will credit him with $160 and the Federal Government will pay the taxes on that $160 at the going tax rate for both the employee and the employer.

In 1949——

Senator HILL. In other words, under that act which we passed at the time of the war where a man in the railroad service went into the military service, including Coast Guard, naval, and air, then the Government undertook the responsibility to pay just what the employer and employee would have paid if the employee had remained in the service of the railroads rather than in the military service; is that right?

Mr. HABERMEYER. That is right.

Senator HILL. Go ahead.

Mr. HABERMEYER. In 1949 we presented a request to the Congress for payment of those military service credits and there was considerable dispute by the Bureau of the Budget as to whether or not we should receive the amount requested.

At that time this very committee resolved the question by establishing a basis where we would receive the remainder of the $334 million. This committee gave us this remainder in five installments.

Senator HILL. $334 million was the sum total?

Mr. HABERMEYER. That would pay for the military service for the period January 1937 through June 1948.

After receiving the first two installments the Bureau of the Budget again raised the question, but they resolved it by seeing that we got the remaining installments.

In 1951 the Railroad Retirement Act was amended, as you gentlemen probably know, whereby annuities were increased 15 percent and survivor benefits 33 percent, and in order to pay for those increases, there was a provision made whereby men with less than 10 years' service in the railroad industry were transferred to the social security system.

As I stated before, the Bureau of the Budget again raised the cry that the military service credits should be reduced and we should not get what we were entitled to under the law but we did.

In 1954 in testifying before the Hardy committee when they were discussing the military service credits with respect to social security, the Bureau of the Budget and General Accounting Office again claimed that the Railroad Retirement Board received too much money from the Federal Government in terms of military service credits, not stating that we received the money illegally, but saying that they did not think the benefits we would pay would cost as much as the Federal Government had contributed.

At the very same time they were advocating that the social security system be put on the same basis as the Railroad Retirement Board with respect to military service credits, that is basing it on a tax basis.

The Hardy committee in the House ignored the protest and left the Railroad Retirement Act substantially as it was.

We have made a claim now for the last few years for military service credits from July 1, 1948, through December 31, 1954. That is the last period we were able to study. That figure now has reached $91,977,000.

EFFECT OF BUDGET ACTION ON BOARD

The Bureau of the Budget has disallowed that item 2 years in a row, stating that they feel that an amendment should be made to our law not only denying us this $91 million, but going back and taking some $355 million, that we had already received, away from us.

It is of great concern to us as members of the Board because we are faced with a situation, as you mentioned a moment ago, wherein the benefits that we pay exceed the revenues that we are getting to the tune of about $170 million a year.

Any action denying us not only this $91 million, but taking $355 million more away, could put the railroad retirement system in very, very serious condition.

So we feel that the law says we are entitled to this money and we feel that the Board should receive it.

Senator HILL. How much do you have in your trust fund now?

Mr. HABERMEYER. The trust fund at the present time is approximately $3,600 million, but that money is not money that is surplus. It is already committed. I mean we have committed not only that $3.6 billion but a lot more than that in the form of benefits that we are obligated to pay.

Senator HILL. You have a definite obligation just like a life insurance company.

Senator IVES. When will the trust fund become exhausted?

Mr. HABERMEYER. Our actuary says at the present time it will be exhausted by 1990. Now that seems like a long time away, but when you consider it in terms—that is the date that men 32 and 33 years old will be retiring—it is not so far away.

LEGAL OPINION ON PROVISION REQUESTED

Senator HILL. I wish you would go over your testimony you have given. You have made a good statement here and I want to thank you for it, but there may be some other details or some other facts or something that maybe you would like to put in the statement.

Then I wish you would have your lawyer also provide, to go into your statement, that provision in the statute under which you make your claim.

I want a full, detailed statement on this matter from the very day the statute was passed, including the provisions of the statute under which you make your claim right down to today. Give us the whole story so that we may have it for the record.

I think this is an important matter.

(The following letter was received in response to the request for any additional information:)

UNITED STATES OF AMERICA,
RAILROAD RETIREMENT BOARD,
Chicago 11, Ill., April 10, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee of the Committee on Appropriations,
United States Senate, Washington, D. C.

DEAR SENATOR HILL: During the Board's testimony before your subcommittee on April 3, 1958, you requested the Board to file for the record a detailed statement concerning the Board's claim for military service credits under the Railroad Retirement Act, and a statement on the civil service status of the administrative assistants to the members of the Board. This letter is pursuant to your requests.

I. THE BOARD'S CLAIM FOR MILITARY SERVICE CREDITS UNDER THE RAILROAD RETIREMENT ACT

As I stated in my testimony on April 3, 1958, this issue arose for the first time in 1949 when the Board requested an appropriation for the fiscal year 1950 of the balance then due for such military service credits, and this issue has continued to date. The congressional authority for the Board's request is contained in section 4 (n) of the Railroad Retirement Act which provides as follows:

"In addition to the amount authorized to be appropriated in subsection (a) of section 15 of this Act, there is hereby authorized to be appropriated to the railroad retirement account for each fiscal year, beginning with the fiscal year ending June 30, 1941, (1) an amount sufficient to meet the *additional cost* of crediting military service rendered prior to January 1, 1937, and (2) an amount found by the Board to be equal to the amount of the total *additional excise and income taxes* which would have been payable during the preceding fiscal year under subchapter B of chapter 9 of the Internal Revenue Code, as amended, with respect to the compensation, as defined in such subchapter B, of all individuals entitled to credit under the Railroad Retirement Acts, as amended, for military service after December 31, 1936, and prior to January 1, 1957, if each of such individuals, in addition to compensation actually earned, had earned such compensation in the amount of $160 in each calendar month in which he was in such military service during such preceding fiscal year and such taxes were measured by all such compensation without limitation as to amount earned by any individual in any one calendar month, and (3) an amount found by the Board to be equal to (A) the amount of the total *additional excise and income taxes* which would have been payable during the preceding fiscal year under chapter 22 of the Internal Revenue Code of 1954 with respect to the compensation, as defined in such chapter, of all individuals entitled (without regard to subsection (p) (1) of this section) to credit under this Act for military service after December 1956 if each of such individuals, in addition to compensation actually paid, had been paid such compensation in the amount of $160 in each calendar month in which he was in such military service during such preceding fiscal year and such taxes were measured by all such compensation without limitation as to amount paid to any individual in any one calendar month, less (B) the amount of the taxes which were paid with respect to such military service under sections 3101 and 3111 of the Internal Revenue Code of 1954. The additional cost of crediting military service rendered prior to January 1, 1937, shall be deemed to be the difference between the actuarial value of each annuity based in part on military service and the actuarial value of the annuity which would be payable to the same individual without regard to military service. In calculating these actuarial values, (1) whenever the annuity based in part on military service begins to accrue before age 60, the annuity without regard to military service shall be valued on the assumption of deferment to age 60, and whenever the annuity based in part on military service is awarded under subsection 2 (a) of section 2 (a), the annuity without regard to military service shall be valued on the assumption of deferment to age 65; and (2) all such actuarial values shall be calculated as of the date on which the annuity based on military service begins to accrue and shall not thereafter be subject to change. All such actuarial calculations shall be based on the Combined Annuity Table of Mortality and all calculations in this subsection shall take into account interest at the rate of 3 per centum per annum compounded annually. The Railroad Retirement Board, as promptly as practicable after the enactment of this amendment, and thereafter annually, shall submit to the Bureau of the Budget estimates of such military service appropriations to be made to the account, in addition to the annual estimate by the Board, in accordance with subsection (a) of section 15 of this Act, of the appropriation to be made to the account to provide for the payment of annuities, pensions and death benefits not based on military service. The estimate made in any year with respect to military service rendered prior to January 1, 1937, shall be based on the cost, as determined in accordance with the above provisions, of annuities awarded or increased on the basis of such military service up to the close of the preceding fiscal year and not previously appropriated for, and shall take into account interest from the date the annuity began to accure or was increased to the date or dates on which the amount appropriated in to be credited to the railroad retirement account. In making the estimate for the appropriation for military service rendered after December 31, 1936, the Board shall take into account any excess or deficiency in the appropriation or appropriations for such service in any preceding fiscal year or years, with interest thereon, resulting from an overestimate or underestimate of the number of individuals in creditable military service or the months of military service." (Emphasis supplied.)

That part of the above-quoted section 4 (n) relating to appropriations for the crediting of military service rendered prior to 1937, and contained in clause (1) of said section, was enacted in 1940 (Public Law 801, 76th Cong.). Since the crediting of military service for annuities under the Railroad Retirement Act was not an obligation of the railroad retirement system the Government agreed to assume the financial obligation for this additional burden on the system.

It was not feasible to provide for payment by the Government in specified tax rates because, before January 1937, railroad service (though counted for railroad benefit purposes) was not subject to any retirement tax. Under these circumstances the amendment enacted in 1940 provided for the payment by the Government of the additional cost the Board would incur in crediting prior military service (military service generally in World War I) toward annuities of individuals receiving such military service credits.

The part of said section 4 (n) relating to appropriations for the crediting of military service rendered after 1936, and contained in clauses (2) and (3) of said section, was enacted in 1942 (Public Law 520, 77th Cong.), and the Government's obligation therefor was fixed on an actuarial level tax basis, that is, the Government assumed the role of a railroad employer, agreeing to do what any railroad employer would do, that is, pay into the railroad retirement account both the employer and employee current tax rates for the support of the railroad retirement system, in advance of the individual's retirement, for each month in which the individual was in military service creditable under the Railroad Retirement Act. The only difference between the Government and any other railroad employer being that the latter, though paying both the employer and employee taxes into the Railroad Retirement Account, deducts the employee's taxes from the employee's salary, while the Government, in its role as railroad employer, makes no deductions from the employee's military pay. In order to avoid discrimination as between railroad men with respect to their service in the armed forces, a flat wage of $160 a month was assumed, based on the then current average railroad earnings. Moreover, it was administratively difficult to charge the Government the employer and employee taxes on earnings determined or computed on an individual basis. For these reasons, the Government agreed, through Congressional action approved by the President, to pay to the railroad retirement system the railroad retirement employer and employee taxes at the current rate on assumed pay, in every case, of $160 a month (and the statute provided for the Board to give credit toward retirement annuities on that same amount for each month of allowable military service).

The Congress thus provided two methods for payment by the Government of the liability assumed by the railroad retirement system for crediting military service toward annuities under the Railroad Retirement Act. The first method was on an additional cost basis, and was limited to military service rendered prior to 1937. The second method was on an actuarial level tax basis, payable in advance, the same as retirement taxes for railroad service, and was limited to military service creditable under the Railroad Retirement Act rendered after December 31, 1936. The Congress was thus aware of the two different methods for payment by the Government of the obligation for military service creditable under the Railroad Retirement Act; and the Congress deliberately distinguished between such military service rendered before 1937 and that rendered after 1936, with regard to the method of payment by the Government.

The bulk of the amounts appropriated by the Government to the railroad retirement account for military service rendered after 1936 on the actuarial level tax basis for service rendered during World War II when the tax rates were low, that is 2¾ percent, 3 percent, and 3¼ percent on each side, or, roughly, a total of 6 percent of payroll (consistent with the employer and employee railroad retirement taxes) on $160 a month for each month of such military service. The higher tax rates of 5¾ to 6¼ percent on each side are applicable only to creditable military service rendered after 1946. After World War II, the Board prepared a sample method for determining the amount still due for creditable military service rendered during World War II and submitted it to the Bureau of the Budget for approval before proceeding to make such determination. The Bureau approved the method and the determination made in 1949, for the fiscal year 1950, showed that the Government owed the railroad retirement system $166 million for crediting military service up to June 30, 1948 (on the basis of the tax rates in effect at the time the military service was rendered).

The Bureau of the Budget then contended, for the first time, that the Congress should not have provided, as it did, that the Government's obligation for military service after 1936 should be on an actuarial level tax basis, the same as for railroad service, payable in advance, but should have been on a cost basis, the same as for military service rendered before 1937. The Bureau indicated that it would seek amendatory legislation to that effect, and so advised the House Subcommittee on Appropriations when the subcommittee considered the Board's budget for the fiscal year 1950. The House subcommittee was persuaded to hold off appropriating to the Board the $166 million which the Board claimed. (See H. Rept.

No. 228, on H. R. 3333, 81st Cong., 1st sess.) The Senate subcommittee, however, in considering the Board's appropriation request for fiscal year 1950, took a different view. It concluded, on the basis of the law in effect, that the amount was owing to the Board, except that it would have divided the amount appropriated into four installments, to be paid in the fiscal years 1950, 1951, 1952, and 1953. (See S. Rept. No. 265, 81st Cong., 1st sess., to accompany H. R. 3333.) The conferees of the House and Senate modified the Senate action by dividing the total amount appropriated into five installments, to be paid in the fiscal years 1950, 1951, 1952, 1953, and 1954. The full amount due was thus appropriated, subject to payment in five installments, as above stated. (See conference report No. 892, 81st Cong., 1st sess., to accompany H. R. 3333, and Public Law 141, 81st Cong., 1st sess., on H. R. 3333.)

The installments for the fiscal years 1950 and 1951 were paid but the Bureau of the Budget withheld approval of the installment due for the fiscal year 1952 because of the amendments in 1951 to the Railroad Retirement Act (Public Law 234, 82d Cong., 1st sess., approved October 30, 1951) which provided, among other things, for the transfer to the social security system of the credits of railroad employees having less than 10 years of railroad service at the time of their retirement or death. The Bureau believed that this would reduce the Board's obligation for creditable military service and that the 1951 amendments should have included a provision for refund to the Government of an appropriate part of the amounts heretofore appropriated for military service credits after 1936. The Bureau presented this view to the Congress at the time the 1951 amendments were considered, but the Congress, nevertheless, made no provision for refunds to either the Government or to railroad employers and employees of the difference in tax rates payable under the social security and the railroad retirement systems with regard to individuals who at retirement or death will have less than 10 years of railroad service. While the savings in costs of crediting military service from this provision was quite evident, it was equally apparent that, by reason of other liberalizing amendatory provisions, there would be substantial increases in the cost of crediting military service for railroad employees with more than 10 years of service, so that both savings and increases in the cost of crediting service were involved in this amendatory proposal. By its letter dated July 30, 1952, the Board called this to the Bureau's attention and protested the Bureau's withholding the approval of the installment for the fiscal year 1952, and after such protest the Bureau released this installment. In due course, the installments for the fiscal years 1953 and 1954 were also paid.

Thereafter, the Board submitted to the Bureau for approval a sample method for determining the amount due the Board for such creditable military service rendered during the period July 1, 1948, through December 31, 1954. The Bureau approved the method and, pursuant thereto, the Board determined that the amount due the Board was roughly $90 million, and requested the Bureau to include it in the Board's budget. The Bureau, however, refused to do so, claiming that the Congress should not have provided for the financing of the military service rendered after 1936 on the same basis as railroad service, that is, on an actuarial level tax basis payable in advance, but on a cost basis payable after the benefits on the basis of military service become due. The exact amount now due up to December 31, 1954, is $91,977,000.

This issue was considered by a congressional committee during the hearings in 1955 on a bill which was later enacted as Public Law 881, 84th Congress, approved August 1, 1956. This committee did not adopt the views of the General Accounting Office for amending section 4 (n) of the Railroad Retirement Act to change the method of appropriation for military service from an actuarial level tax basis to a cost basis. All the committee did with regard to the appropriation authorization was to propose amending section 4 (n) of the Railroad Retirement Act to modify the Government's obligation to the railroad retirement system by reducing, for future military service, the amount allowable under the regular retirement tax program by the amount of the social security taxes that would otherwise be assessed on the same military service. In all other respects, however, it left the present provisions unchanged, and the bill was enacted in that form. The Government's obligation for military service after 1936 thus continues by law on an actuarial level tax basis, payable in advance, the same as for railroad service. (See clause (3) of the above-quoted section 4 (n) of the Railroad Retirement Act, which was added in 1956 by the above-mentioned Public Law 881.)

The Board believed that the amendment of section 4 (n) of the Railroad Retirement Act by Public Law 881 above stated, had ended the controversy. This

enactment constituted a most recent affirmation by the Congress of the Government's obligation (mentioned above) with regard to the crediting under the Railroad Retirement Act of military service rendered after 1936 on an actuarial level (rather than additional) cost basis, just as in the case of strict railroad service. The Senate Committee Report No. 2380 on the bill H. R. 7089 contains, in the section-by-section analysis of the bill, the following explanation of the provisions of this section:

> "This section contains amendments to the Railroad Retirement Act of 1937. These amendments, which take into account the existing interrelation between the railroad retirement system and the old-age and survivors insurance system, *are designed to continue the persent policy under both systems with respect to the performance by workers of military or naval service.*
>
> "(1) *After 1956* there will be creditable under railroad retirement, wage credits of $160 for each month of military service performed by an individual who has at least 10 years of coverage under the Railroad Retirement Act (including coverage acquired by military service).
>
> "(2) The compensation received for military service by an individual who, previously, was in railroad employment within the 2-year period immediately preceding his entrance into military service will be subject to the regular 4 percent social security tax (2 percent being paid by the individual and 2 percent by the Government). *However, the Government will, by direct appropriations, reimburse the railroad retirement account for each month of military service performed by such individual by an amount equal to 12½ percent of the $160 wage credit,* minus the amount of the 4 percent social security tax paid with respect to his military compensation. (The 12½ percent represents the combined rates of tax payable by both the employer and employee under the Railroad Retirement Act.)" [Italic supplied.]

Nevertheless, the Bureau of the Budget requested the Board, early in 1957, to draft an amendment to the Railroad Retirement Act (and the Board drafted such an amendment, reserving its rights to make such comments thereon as it may deem appropriate) under which, apparently, no claim would be made by the Government for any part of the, some, $350 million heretofore appropriated (for military service rendered in the period before July 1, 1948) on an actuarial level tax basis, but that with respect to such military service rendered in the period after June 30, 1948, the Government's obligation would be changed to a cost basis. The effect of this would be that the railroad retirement system would lose some $90 million to which it was then entitled under present law and which it had already claimed for military service credit in the period July 1, 1948, to December 31, 1954, and also the undetermined amount due for military service rendered after 1954. The Board made it known to the Bureau that it would oppose such an amendment because of these losses. Thereafter the Board submitted to the Bureau for approval a sample method for determining the amount due the Board for creditable military service rendered after 1954. (This method was the same as that previously approved by the Bureau for military service rendered in the period after 1936 and before July 1, 1948, and in the period July 1, 1948, through December 31, 1954.) But this time the Bureau refused to approve the method for the study on the ground that the Bureau anticipated that the above-mentioned amendment to the law would be enacted and would make such study unnecessary.

During the hearings in March and May of 1957 before a Senate subcommittee on bills to amend the Railroad Retirement Act, the General Accounting Office testified in support of its proposal to transfer out of the railroad retirement account (that is, the reserve account from which benefits are payable) some $350 million. This proposal was at that time discussed by the chairman of the subcommittee and the Chairman of the Railroad Retirement Board. (See pp. 560–564, Senate hearings, S. 1313, 85th Cong., 1st sess.) To adopt such a proposal would mean, of course, the unilateral and retroactive abrogation of what in substance is an already accomplished contract between the Government and the railroad retirement system. Would the Congress entertain such a proposal from any railroad company or other covered employer simply on the basis of a contention that the amount of taxes paid by it for itself and its employees might be used in part for benefits to the employees of another railroad? In a system such as the railroad retirement system, operated on a group insurance basis, it is inevitable that some persons will obtain more benefits than others though having made no more contributions to the system. It is elementary that in such a group program, particularly one like the railroad retirement system established on a level-cost reserve basis, the amount not spent or obligated for benefits to

some are spent or obligated for benefits to others; and the military service payments and credits are in no different position than ordinary railroad service in this respect. The taking back of military service appropriations already committed, and counted on as part of the built-up reserve for payment of accrued benefit liability, would have a most disastrous effect.

The railroad retirement system is now underfinanced, on a level-cost basis, by over 3 percent of taxable payroll (or by about $170 million a year). The Board, railroad management, and railroad labor are now striving to eliminate this deficiency. The General Accounting Office, as well as the Bureau of the Budget, are seriously concerned about this deficiency and are urging the Board to do whatever is necessary to place the railroad retirement system on a sound financial basis. At the same time, however, the General Accounting Office and the Bureau of the Budget continue to propose to transfer money already in the Railroad Retirement Account to the General Treasury to the extent of some $350 million. This would increase even further the deficit in the financing of the railroad retirement system unless benefits are reduced, or the already heavy taxes on railroad workers now employed and on their employers are increased.

As stated above, the Board believed that the enactment of the Hardy bill (Public Law 881, supra), which amended section 4 (n) of the Railroad Retirement Act to include clause (3), settled any controversy with regard to the Government's obligation to the railroad retirement system. Such amendment reduced the Government's obligation for future military service creditable under the railroad retirement system by the amount of the social-security tax for the same military service and thereby eliminated duplicate payments by the Government for the same military service. The Board cannot understand the insistence of the General Accounting Office and the Bureau of the Budget to place the appropriation for military service credits under the railroad retirement system on a straight-cost basis while at the same time advocating the crediting of military service under the social-security system on an actuarial *level tax* basis. Thus, during the hearings on House Resolution 549, 83d Congress, before the Select Committee on Survivor Benefits, the following testimony was submitted:

1. Testimony of Mr. Philip S. Hughes, then Assistant Chief Labor and Welfare Division of the Bureau of the Budget (p. 9):

"* * * what I am saying is that if the Government continued to pay the *residual cost* of these military service credits over a long period of years, and in effect gives special consideration to this particular employee group, *the effect of that would be to short the OASI fund, by the military employees share of the cost of the basic benefits which are paid under this system.*" [Italic supplied.]

2. Testimony of Mr. Lloyd Nelson, of the General Accounting Office (p. 21):

"I believe, in applying logic to this, that it would be appropriate for the Federal Government, putting military under the social-security system, to say that the man and the Government would pay 2 percent and 2 percent, a total of 4 percent, *even though that may be thrown out in the calculation of his benefits 35 years hence.*" [Italic supplied.]

3. Testimony of Mr. Lloyd Nelson, then Assistant Director of the Accounting Systems Division of the General Accounting Office (p. 22):

"* * * It seems to me that the Government's liability under current law *should be measured by the tax rate*, 1½ percent and 1½ percent until the new amendment went into effect, and now 2 percent and 2 percent. That would be a correct measure of the Government's obligation under the present law. If that calculates to $240 million that would be the correct amount." [Italic supplied.]

4. Memorandum from Mr. Robert J. Myers, Chief Actuary of the Social Security Administration (p. 188):

"Furthermore, a provision enacted in 1954 permits as many as 5 years of low earnings to be omitted from an individual's wage credit in computing his average earnings for social-security benefit purposes; *thus, many veterans will be able to get higher benefits by omitting the period containing their military service entirely from the computation of average earnings then by using the comparatively low military service credits.* [Italic supplied.]

Under the Social Security Act, unlike the Railroad Retirement Act, a complete forfeiture of taxes paid is possible, even those paid with respect to military service, since, apart from the new-start provisions which benefit primarily those persons now at or near retirement age, no less than 10 years of covered service (40 quarters of coverage) is required for the fully insured status necessary to eligibility for old-age or disability insurance benefits, and the incidental benefits to the beneficiary's wife and children during his lifetime, and, in many instances, necessary to eligibility for the survivors' benefits. Moreover, the new dropout

provisions in the Social Security Act, by which an individual may have as much as 5 years' time excluded in computing the monthly average wage used in determining the amount of his benefits and his dependents', so that he may exclude the years of low military pay, would result in the military service for which the Government has paid taxes to the social-security system having little or no effect in adding to the amount of benefits. While the General Accounting Office and the Bureau of the Budget propose to recover from the railroad retirement account amounts heretofore appropriated for military service because the Railroad Retirement Act would be relieved of paying benefits on the basis of military service to those with less than 10 years of service, they are completely unconcerned, as indicated by the above-quoted testimony, about the reducing effect on the cost of crediting military service under the social-security system of the 40 quarters of coverage (10 years' service) requirement and the dropout provisions.

Recently, the House Committee on Appropriations commented, as follows, on the attempts of the Bureau of the Budget and the General Accounting Office to obtain, in essence, a revocation of the present congressional policy of long standing with regard to the Government's obligation to pay for military service credits under the railroad retirement system:

"The committee took considerable time during the hearings this year to discuss with the Board the question of appropriations for military service credits. After receiving detailed information concerning this matter, the committee is amazed at the stand taken by the Bureau of the Budget and the General Accounting Office in not only recommending that no further appropriations for this purpose be made but that part of the appropriations already made should be recovered. The law is quite clear in not only authorizing the appropriations which have already been made but in authorizing additional appropriations which would total many millions of dollars. It apparently boils down to the fact that the General Accounting Office and the Bureau of the Budget do not agree with the law which Congress has passed and would like to see it changed and changed retroactively, however, no such bill has been formally submitted by the administration.

"It appears to the committee that the General Accounting Office and the Bureau of the Budget realizing the futility of attempting to get their ideas enacted into law, are attempting to accomplish indirectly what they realize cannot be done in a straight-forward manner. The committee is especially surprised at the General Accounting Office being a party to any such scheme."

In conclusion, it is quite clear that the present claim of the Board to $91,977,000 for military service credits under the Railroad Retirement Act for the period July 1, 1948, through December 31, 1954, is due under the law.

II. THE CIVIL-SERVICE STATUS OF THE ADMINISTRATIVE ASSISTANTS TO THE MEMBERS OF THE BOARD

Following attempts to remove certain higher level positions in the Railroad Retirement Board from the established merit system, special provisions (secs. 5 and 6) were included in Public Law 383, 84th Congress, enacted on August 12, 1955, to make certain that employees of the Railroad Retirement Board would be appointed to, and would retain, their positions on a strictly nonpolitical basis under the competitive civil-service system. Thus, section 5 of Public Law 383, 84th Congress, amended section 10 (b) of the Railroad Retirement Act, to include the following: "All positions to which such individuals (employees of the Railroad Retirement Board) are appointed, *except one administrative assistant to each member of the board*, shall be in and under the competitive civil service and shall not be removed therefrom." [Italic supplied.] A like amendment was made by section 6 of Public Law 383 to section 12 (1) of the Railroad Unemployment Insurance Act.

The language with regard to the "one administrative assistant to each Board member" was included at the instance of Senator Potter, who stated on the floor of the Senate, as follows: "I was greatly concerned over the fact that sections 5 and 6 were too inclusive. It has been my feeling—and the debate has shown that certainly most members of the Senate agree about this—that a member of the Board should be entitled to select his own administrative assistant, his own confidential assistant, whomsoever he may desire to select, and should not be restricted by the language of sections 5 and 6 as they pertain to the civil service" (Congressional Record, July 28, 1955, p. 11790).

On the basis of the explicit statutory language in this regard, and Senator Potter's explanation of its purpose, the Board's position was, after obtaining the advice of its counsel, that the amendatory provision did not effect any change

in the positions of the administrative assistants (3) to the 3 Board members and that the statuses of the incumbents of these positions remained in exactly the same situation as regards the Civil Service Commission and its rules and regulations as if the provisions of sections 5 and 6 of Public Law 383, 84th Congress, had not been enacted. In other words, the Board's position was that the incumbents of 2 of the positions who then had competitive civil-service status retained that status and their positions; and that the incumbent of the other position, who had no civil-service status and was the only 1 of the 3 whose position had been placed on schedule C of the civil-service rules, continued in his position without civil-service status. The Civil Service Commission ruled, however, by letter of December 27, 1955, that all 3 positions of administrative assistant were "specifically excepted from the competitive civil service by sections 5 and 6 of Public Law 383 * * * Congress, * * * by its specific exception, has taken these positions out of the competitive service, and, incidentally, has also taken the incumbents of the 2 positions of assistants to the Board members out of the competitive service."

Following the ruling of the Civil Service Commission Senator Potter introduced the bill, S. 2604, which would amend further the amendment made by sections 5 and 6 of Public Law 383, 84th Congress, to section 10 (b) of the Railroad Retirement Act and section 12 (1) of the Railroad Unemployment Insurance Act, respectively, by adding language to the effect that every individual who is appointed to the position of administrative assistant to a member of the Railroad Retirement Board, and who has previously acquired competitive status in the classified civil service shall retain such status while in the position of administrative assistant and, upon his being relieved from that position, except for cause or by resignation, shall have such rights to another position in the Board of the same grade as the position of administrative assistant as if the termination of his employment therein had been due to a reduction in personnel.

On August 23, 1957, the Board made a report to the Committee on Labor and Public Welfare on the bill, favoring its adoption because the bill would have a beneficial effect on the Board's administration by continuing the flexibility in appointment the original amendment was designed to allow, and providing also the assurance to the employees in the classified civil service, whose services are desired for such a position, that acceptance of appointment would not result in loss of substantive rights. It included also in the report the views of the Bureau of the Budget that the bill would single out the incumbents of the three positions covered by the bill for preferential treatment in contrast to that generally provided incumbents of excepted positions.

Sincerely yours,

HOWARD W. HABERMEYER, *Chairman.*

(The subcommittee received the following communication from the General Accounting Office with reference to the matter of military wage credits, with the request that it be incorporated in the hearings:)

COMPTROLLER GENERAL OF THE UNITED STATES,
Washington, April 14, 1958.

B–114817

Hon. LISTER HILL,
Chairman, Subcommittee on Departments of Labor, and Health, Education, and Welfare, and Related Agencies, Committee on Appropriations, United States Senate.

DEAR MR. CHAIRMAN: We would appreciate the opportunity to submit a statement on our views regarding appropriations for military service credits, for insertion in the record of the hearings on the 1959 fiscal year appropriation for the Railroad Retirement Board. This subject was discussed during the hearing, and a prepared statement for the record has been requested from the Board. We would appreciate also having the enclosed report, dated April 26, 1957, to the Congress on "Significant Financial Aspects of the Railroad Retirement Board, December 1956," made a part of the record.

As stated in the enclosed report, the Board has received appropriated funds and accrued interest thereon approximating $355 million more than was required to meet the cost of crediting military service as railroad employment and, under the provisions of the Railroad Retirement Act, the Board is entitled to an additional appropriation estimated to be about $89 million.

The excessive payments or windfall to the Board for military service credits resulted principally from the 1951 amendments to the Railroad Retirement Act,

which, without reducing or requiring any transfer of appropriations received by the Board for such military service credits:

1. Relieved the railroad retirement system of any financial responsibility for military service credits if the combined railroad and military service of an individual is less than 10 years; and

2. Transferred from the Board to the social-security system the responsibility for paying a large portion of the benefits arising from military service for individuals with 10 years or more of railroad and military service.

An additional reason for the excessive payments is that railroad retirement benefits, otherwise payable on the basis of military service, are reduced when the military service of a railroad worker has been used as a basis for awarding compensation and pension benefits paid by the Veterans' Administration.

In our report dated April 26, 1957, we recommended that the Congress make a change, to be applied retroactively, in the method of reimbursing the Board for military service credits. The method we proposed would result in the Board's returning to the Treasury about $355 million and the denial of the additional appropriation request for $89 million. These amounts have changed slightly since our report.

The basic issue regarding Federal payment for military service credits resulted from certain amendments to the Railroad Retirement Act. These amendments are discussed briefly in the following paragraphs.

The 1940 amendments gave railroad workers credit under the railroad retirement system for military service performed during war service periods prior to 1937; however, these benefits were reduced by any benefits paid by the Veterans' Administration based upon the same military service. The Board was reimbursed for the additional cost of granting benefits because of military service by an appropriation out of the general fund of the Treasury. No windfall to the Board is involved as a result of the 1940 amendments.

The 1942 amendments gave railroad workers credit under the railroad retirement system for military service performed during war service periods subsequent to 1936 and made no change in the provision for reducing railroad retirement benefits because of veteran benefits. However, under the 1942 amendments, the Board was reimbursed the cost of crediting military service on a "tax basis" instead of on an additional cost basis as was provided under the 1940 amendments for military service performed prior to 1937. The term "tax basis" means that the Board is to receive appropriations out of the general fund of the Treasury in an amount equal to the payroll taxes which would have been payable if the military service had been railroad service. The 1942 amendments resulted in a windfall to the Board since the Board received payment for military service at the same rate as it did for railroad service, although the liability for military service was less than that for railroad service because of the offset for veteran benefits.

The 1951 amendments did not change the appropriation authorization to the Board for crediting military service. The Board continued to receive an amount equal to the payroll taxes which would have been payable if the military service had been railroad service, regardless of whether the railroad worker ever became eligible for railroad retiremen benefits, and at the same time:

1. Eliminated railroad retirement benefits based upon military service when the railroad worker had less than 10 years of creditable military and railroad service, except for infrequent instances of residual benefits, although payment had been made to the Board for crediting such military service, and

2. Continued benefits based upon military service when the railroad worker had 10 or more years of creditable military and railroad service; however, the social-security system was required to pay to the Board a substantial part of the cost of such benefits through an underwriting arrangement, commonly known as the financial interchange. The cost to the social-security system for the underwriting is being borne by an appropriation authorization to the social-security system out of the general fund of the Treasury, at no cost to the Board.

The 1951 amendments resulted in a windfall to the Board since the amendments continued authority for appropriations for military service on the same basis as previously authorized, although the liability for military service was either eliminated or substantially reduced, and the Board was not required to pay the social-security system the applicable social-security taxes as it was required to do in the case of railroad service.

The estimated amounts involved in the windfall to the Railroad Retirement Board, including the appropriation requested, are tabulated as follows:

Appropriations made	$334, 000, 000
Interest on invested appropriations	85, 000, 000
Total	419, 000, 000
Less probable costs (see note)	64, 000, 000
Present windfall	355, 000, 000
Additional appropriation requested	89, 000, 000
Total windfall if additional appropriation requested is granted	444, 000, 000

NOTE.—The probable costs may be increased by liberalization of benefit rates; however, any increased costs no doubt would be more than offset by the accruing of additional interest on invested appropriations.

A review of the Board's comments concerning the reimbursement matter shows that there is no dispute with us concerning the interpretation of the law. In contrast to our position, the Board's position is that Congress, having enacted legislation authorizing payment on the present basis, should not now require a retroactive adjustment, especially in view of the serious deficiency which now exists in the financing of the railroad retirement system. However, this position by the Board is not consistent with that of both the railroad industry and labor which have stated that the railroad retirement system is self-supporting and in no manner subsidized by the Federal Government. In this connection, Mr. Murray W. Latimer, a former Chairman of the Railroad Retirement Board, expressed the following views in a letter dated March 5, 1956, to the House Committee on Interstate and Foreign Commerce:

"Despite repeated assertions by many that the railroad retirement system is self-supporting, it has received from the Federal Government, in the guise of military service contributions, about $335 million, which is in large part pure subsidy and which may well be recaptured as such."

We believe that the statutory responsibility of the General Accounting Office requires reports to the Congress of conditions arising as a consequence of laws enacted by the Congress. However, whether the Federal Government should contribute to or subsidize the railroad retirement system is a matter of policy for determination by the Congress. Our recommendation that no further sums be appropriated to the Board for these purposes pending further congressional consideration of the matter conforms with our long-established position that activities should not be subsidized through the guise of other payments and that any subsidy appropriations should be separately identified.

Sincerely yours,

JOSEPH CAMPBELL,
Comptroller General of the United States.

SIGNIFICANT FINANCIAL ASPECTS OF THE RAILROAD RETIREMENT BOARD DECEMBER 1956

Report to the Congress of the United States by the Comptroller General of the United States

As a result of our examinations and audits of the Railroad Retirement Board, pursuant to the provisions of the Budget and Accounting Act, 1921 (31 U. S. C. 53), and the Accounting and Auditing Act of 1950 (31 U. S. C. 67), we call attention to the present insufficiency of the railroad retirement account to meet all benefits provided by the Railroad Retirement Act of 1937, as amended (45 U. S. C. 228a). The actuarial deficit at December 31, 1953, as calculated by the Board, was $2.8 billion and would have been $13.2 billion except that excessive appropriations have been provided by the Federal Government and a substantial liability was shifted to the social security system. The Board has estimated that a liability of approximately $9.8 billion was transferred to the Federal old-age and survivors insurance trust fund in the financial interchange arrangement with the social-security system, authorized by the Congress in the 1951 amendments to the Railroad Retirement Act. In addition, the railroad retirement system has benefited by appropriations for military service being excessive by $355 million and by interest allowances being excessive by $217 million.

This report contains information and recommendations concerning the actuarial condition of the railroad retirement account and the excessive appropriations and interest expense borne by the Federal Government.

ACTUARIAL CONDITION OF THE RAILROAD RETIREMENT ACCOUNT

The Railroad Retirement Act of 1937 required the Board to make, at intervals not exceeding 3 years, an estimate of the liabilities created under the Railroad Retirement Acts and provides for the appointment of an Actuarial Advisory Committee which shall examine the actuarial reports and estimates made by the Board with authority to recommend to the Board such changes in actuarial methods as it may deem necessary. A report in May 1956 of the sixth actuarial valuation of the railroad retirement account, together with a statement of the Actuarial Advisory Committee, prepared in accordance with these requirements, is included in the Board's annual report for 1955. We did not evaluate the actuarial condition of the railroad retirement account.

Actuarial deficit

The actuarial deficit (unfunded liabilities), as estimated by the Board, has increased steadily from $3.4 billion at the end of 1938 to $12.6 billion at December 31, 1953, before considering the effect of the financial interchange arrangement with the social-security system. The Board has estimated that $9.8 billion of liability at December 31, 1953, was transferred to the social security system by this arrangement, leaving an actuarial deficit of $2.8 billion to be borne by the railroad retirement system. This takes into account, according to the Board, future receipts and benefits to former and present employees, as well as future entrants, and funds on hand at December 31, 1953, of $3.3 billion.

Deficiency in payroll tax rate

According to the Actuarial Advisory Committee, the sixth actuarial valuation report concludes that as of December 31, 1953, the going tax rate of 12.5 percent of taxable payrolls does not equal the net level cost of the system and is deficient by 1.63 percent, resulting in unfunded liabilities increasing at a rate in excess of $86 million a year; a tax rate of 14.13 percent would be required to finance the system indefinitely without any increase or decrease in the existing level of unfunded accrued liabilities and without any change in benefit levels. These figures from the sixth actuarial valuation take into consideration the 1954 and 1955 amendments to the Railroad Retirement Act and to the Social Security Act but do not reflect the 1956 amendments to the Railroad Retirement Act which increased benefit rates without increasing revenues. During congressional consideration of the proposed 1956 amendments to the Railroad Retirement Act, the Congress was furnished information by the Board that the proposed general 10-percent increase in benefits would be equal to 1.57 percent of taxable payroll. Those proposed amendments became law (Public Law 1013), and accordingly the level premium cost shown in the sixth actuarial report should be increased to reflect current law; the revised tax rate after enactment of the 1956 amendments should be approximately 15.7 percent of taxable payrolls merely to keep the deficit from growing larger.

Recommendations

On the premises that the presently existing actuarial deficit of the railroad retirement system should not increase and the system should be maintained on a self-supporting basis, we recommend that (1) the present tax rate be adjusted upward to a level approximating the present annual level costs of benefits and that (2) any future upward revisions in benefits payable be accompanied by a corresponding upward revision in the tax rates. The Railroad Retirement Board has informed us that it is in agreement with these recommendations.

APPROPRIATIONS FOR MILITARY SERVICE CREDITS FROM THE GENERAL FUND OF THE UNITED STATES TREASURY

Current law generally provides a credit of $160 a month by the railroad retirement system for each month that railroad workers are in military service. Such credit was provided without cost to the railroad worker for the period from September 8, 1939, through December 31, 1956, and substantially without cost after December 1956. However, the law (45 U. S. C. 228c–1 (n)) authorizes Federal appropriations to the railroad retirement account, for all such military service credits, on the basis of railroad payroll tax rates in effect during the period of military service (after 1956 there has been a deduction for related social security taxes). Application of the tax rates, which have gradully increased from 6 to 12½ percent, results in a payment by the Government of $115 to $240 for each year that a railroad worker is in military service between September 8, 1939, and

December 31, 1956, inclusive, and $240 for each year, less related social security taxes, for military service after December 31, 1956, because of the amendments made in 1956 (Public Law 881, 84th Cong.).

The Board has received in appropriated funds and accrued interest thereon approximately $355 million more than was required as of June 30, 1956, to meet the cost of crediting military service projected from a rough estimate prepared by the Board as of June 30, 1953. The 1951 amendments to the Railroad Retirement Act (65 Stat. 683) transferred from the Board to the social-security system the responsibility for paying a large portion of the benefits arising from military service without reducing or requiring any transfer of the appropriations received by the Board for the military-service credits. Public Law 881, 84th Congress, partially corrected the situation with respect to military service rendered after December 31, 1956, by providing a reduction in the appropriation to the Railroad Retirement Board for related social-security taxes on the servicemen's base pay. However, the Board continues to be entitled to appropriations after December 31, 1956, greatly in excess of those required to meet the cost of the benefits arising from military service. In a previous audit report to the Congress, issued February 10, 1955, we recommended the recovery of a substantial portion of the $334,429,100 appropriated to the Railroad Retirement Board out of the general funds of the United States Treasury for the purpose of crediting military service as railroad employment.

In addition, and since our previous report, the Board has submitted appropriation requests for free military service totaling $86,336,000 in connection with its request for funds for fiscal year 1957. The Bureau of the Budget deferred approval of $84,625,000 of this amount and the Committee on Appropriations, House of Representatives, stated in part as follows:

> "The committee has not allowed the appropriation of $1,711,000 requested to reimburse the railroad-retirement system for military service credits claimed to have accrued under the Railroad Retirement Act. At about the same time that the committee received this budget, it also received a report from the General Accounting Office, in which they recommend the recovery of a substantial portion of the $334,429,100 already appropriated to the Railroad Retirement Board out of the general funds of the United States Treasury for the purpose of crediting military service as railroad employment. The committee feels that a more detailed study of this situation should certainly be made before any additional appropriations for this purpose are approved."

This Office has no information that the recommended detailed study has been made. It is noted, however, that the appropriation of the amount requested is authorized by section 4 (n) of the Railroad Retirement Act and the Board has recently reinstated its request for 1958, this time for $89,133,000.

The Board has received payment for crediting military service performed through June 30, 1948, as of June 30, 1956, as follows:

Appropriations	$334, 429, 000
Interest on invested appropriations	85, 072, 000
Total appropriations and interest	419, 501, 000

The roughly estimated liabilities for benefits on the basis of military service rendered to June 30, 1956, are:

Board's rough estimate for military service rendered to June 30, 1953, as stated in a letter to the Bureau of the Budget, dated Jan. 19, 1954	$60, 380, 000
GAO's rough estimate for military service rendered from July 1, 1953, to June 30, 1956, based upon the above letter and the amounts of subsequent appropriation requests	4, 000, 000
Total roughly estimated liabilities	64, 380, 000

The excess of appropriations and interest over roughly estimated liabilities as of June 30, 1956, was $355 million. On this subject Mr. Murray W. Latimer, a former Chairman of the Railroad Retirement Board, expressed the following view in a letter, dated March 5, 1956, to the House Committee on Interstate and Foreign Commerce:

"Despite repeated assertions by many that the railroad retirement system is self-supporting, it has received from the Federal Government, in the guise of military service contributions, about $335 million, which is in large part pure subsidy and which may well be recaptured as such."

The April 8, 1942, amendment to the Railroad Retirement Act, which authorized credit for military service after December 31, 1936, provided for appropriations to the railroad retirement system on the basis of the taxes that would have been paid by the employers and employees had such service been covered railroad employment. Subsequently, and without any adjustment in the appropriations theretofore made, the obligations of the railroad retirement account arising as a result of crediting such military service were greatly reduced by the provision of the 1951 amendments to the act requiring 10 years of railroad service to qualify for benefit payments from the railroad retirement account. These amendments provided for transfer to the social security system of the employment credit of all persons who retire or die with less than 10 years of railroad service credit, and for payment under the social security system of the applicable retirement and survivor benefits, except the relatively infrequent residual benefit payments. However, no part of the appropriations to the Board for military service credits was required to be transferred to the social-security system when the related liability was transferred. These changes in law, and the resultant decrease in the amount of funds required to meet the cost of railroad retirement benefits arising from military service credits, cannot be emphasized too strongly.

The liabilities of the railroad-retirement system for military-service credits are further reduced as a result of benefits payable by the Veterans' Administration. Under the provisions of the Railroad Retirement Act, benefits otherwise payable on the basis of military service creditable under the railroad-retirement system are reduced when such military service has been used by the Veterans' Administration as a basis for compensation and pension payments. The Board has estimated that its liabilities on account of military service are reduced by approximately one-third on account of Veterans' Administration benefits. No transfer of funds from the railroad-retirement system to the veterans' system is provided, however.

The major portion of the appropriations which the Board has received for military service relate to World War II service. Public Law 881, 84th Congress (70 Stat. 857), effective January 1, 1957, amends the Social Security Act to authorize appropriations to the social-security system for the same periods of military service for which appropriations have already been received by the railroad-retirement system. Although the same period of military service may not be credited by both the railroad-retirement and social-security systems, and in the case of persons with less than 10 years of combined railroad and military service the credit will be extended by the social-security system, no provision is made in prior law or in Public Law 881 for adjustment or transfer of excess appropriations received by the railroad-retirement system.

Under current law, the basis for crediting the railroad retirement system for creditable military service performed prior to 1937 is the additional present-value cost basis. The additional present-value cost is the difference between the present value of each annuity based in part on military service and the present value of the annuity which would be payable to the same individual without regard to military service. Pursuant to action by the Congress on August 1, 1956 (Public Law 881), the cost basis is used to credit the social security system for creditable military service performed prior to 1957. If the additional present-value cost basis were applicable to the railroad retirement system for creditable military service performed prior to 1957, instead of prior to 1937 as under current law, then the railroad retirement system would be on the same reimbursement basis as the social security system for creditable military service performed prior to 1957.

Recommendations

In view of the substantial excessive appropriations out of the general fund of the Treasury, received and receivable by the Board for crediting military service, we recommend that the Congress redetermine the basis on which the railroad, retirement system should be credited for military service rendered after 1936. We recommend further that the amount of the entitlement be determined on an additional present-value cost basis, which is applicable to the railroad retirement system for military service performed prior to 1937 and to the social security system for military service performed prior to 1957.

Based upon the above recommendation, the appropriation request of $89 million for fiscal year 1958 should be denied and the Board should be required to pay back to the United States Treasury any appropriations and interest earnings that are determined to be excessive which we estimate to be about $355 million, based on an earlier rough estimate prepared by the Board.

The Railroad Retirement Board has informed us that it is in disagreement with these recommendations.

MILITARY SERVICE REIMBURSEMENTS RECEIVED FROM THE SOCIAL SECURITY ADMINISTRATION

Under the terms of the financial interchange arrangement, the Board receives from the Federal old-age and survivors insurance trust fund an amount equal to the benefits which would have been payable by that fund had creditable railroad service been covered social security employment. This amount is based, in part, on military service rendered under the railroad retirement system. Thus, although it has been observed that the Board has already received appropriations many times in excess of its requirements for crediting military service and is, under present law, entitled to receive further sizable appropriations, it also receives additional moneys from the Social Security Administration covering the same creditable military service with respect to service performed from September 15, 1940, through December 31, 1956. The amount of these moneys credited or to be credited by the Administration to the Board has not been determined, but appears to be substantial. Public Law 881, 84th Congress, corrected the situation with respect to military service performed subsequent to December 31, 1956, but left still unresolved the financial adjustment in the period from September 15, 1940, through December 31, 1956.

Recommendation

We recommend that a periodic determination be made of the amount credited by the Administration to the Board on account of military service performed prior to January 1, 1957, and that the Board be required to pay the amounts so determined into the general funds of the United States Treasury. The Railroad Retirement Board has informed us that it is in disagreement with this recommendation.

INTEREST RATES ON INVESTMENTS OF THE RAILROAD RETIREMENT SYSTEM

Section 15 of the Railroad Retirement Act authorizes the issuance of 3-percent Treasury special obligations for the railroad retirement system. On the other hand, section 201 of the Social Security Act authorizes the issuance of Treasury special obligations for the social-security system at the average rate of interest on certain obligations forming part of the public debt. These rates were 2⅜ percent at June 30, 1953, 2¼ percent at June 30, 1954, 2¼ percent at June 30, 1955, and 2½ percent at June 30, 1956.

It is estimated that the interest paid to the railroad retirement system was approximately $177 million in excess of what it would have been if the system had earned the same rate as the social-security system from July 1, 1939, to June 30, 1956. The excess amounted to approximately $15 million in 1956.

The following table shows that the interest rate received by the railroad retirement system has been considerably in excess of the rate received by the social-security system since 1940.

As of June 30—	Investments (billions of dollars)		Interest rate (percent)	
	Federal old-age and survivors insurance trust fund	Railroad retirement account	Federal old-age and survivors insurance trust fund	Railroad retirement account
1937	0.3	0.1	3.0	3
1938	.7	.1	3.0	3
1939	1.2	.1	3.0	3
1940	1.7	.1	2.9	3
1941	2.4	.1	2.5–3.0	3
1942	3.2	.1	2.51	3
1943	4.2	.2	2.258	3
1944	5.4	.3	2.195	3
1945	6.5	.5	2.127	3
1946	7.5	.7	2.05	3
1947	8.7	.8	2.078	3
1948	9.9	1.4	2.2	3
1949	11.2	1.7	2.2	3
1950	12.6	2.1	2.2	3
1951	14.3	2.4	2.2	3
1952	16.2	2.9	2.3	3
1953	17.8	3.1	2.4	3
1954	19.4	3.3	2.3	3
1955	20.5	3.5	2.3	3
1956	22.0	3.6	2.5	3

The difference in interest rates between the two systems has permitted the railroad retirement system to gain approximately $54 million through June 30, 1956, under a financial interchange arrangement between the two systems authorized by section 5 (k) of the Railroad Retirement Act. This gain, which is part of the $177 million excess interest referred to above, resulted from the railroad retirement system receiving 3 percent on invested funds and at the same time paying a lower interest rate on the indebtedness to the social security system arising under the financial interchange arrangement.

Additional information concerning this matter is presented on pages 23 to 25 of our audit report for the Railroad Retirement Board for the fiscal year 1953.

The problem exists as to the justification for different interest rates between the two systems and for the continuation of payment of an interest rate on railroad retirement funds in excess of that being paid by the Treasury Department in obtaining funds from the public.

Public Laws 854 and 880, 84th Congress, approved July 31 and August 1, 1956, respectively, authorized the issuance of Treasury special obligations for the civil service retirement and social security systems at the average rate at the end of the calendar month next preceding the date of issue, borne by all marketable interest-bearing obligations of the United States then forming part of the public debt that are not due or callable until after the expiration of 5 years from the date of original issue, adjusted to the nearest multiple of one-eighth of 1 percent. This rate as of September 30, 1956, was 2½ percent.

Recommendation

We recommend that the Congress establish an interest rate for special obligations for the railroad retirement system consistent with that recently established for the civil service retirement and social security systems. The Railroad Retirement Board has informed us that it is in disagreement with this recommendation.

INTEREST EARNED ON APPROPRIATION ADVANCES

Until 1952 a procedure was in effect which enabled the Railroad Retirement Board to invest appropriations which were received in advance of, and sometimes in excess of, actual tax collections. Although this procedure was prospectively corrected by the Congress in 1952, the Board has been permitted to retain approximately $40 million of interest earned by investment of these advances prior to actual receipt of the taxes.

We have no recommendation for corrective action but consider it advisable to have the Congress aware of this situation when considering remedial action on the other points contained in this report.

EFFECTIVE DATE OF PROVISIONS

Senator SMITH. Mr. Chairman, when did that provision become law?

Mr. HABERMEYER. 1942. It was unanimously passed by both the House and Senate and approved by the President.

Senator HILL. The question came up about these men in the railroad service, what would happen about their retirement as they went into the Armed Forces. Under that statute the Government assumed to make the payments which would have been made by the employer and the employee, had the employee remained in the service of the railroads rather than go into the Armed Forces.

Senator SMITH. I remember it quite well back in the 1940's, but I did not realize it was so far back as that.

Mr. HABERMEYER. 1942 it was passed and there was a big debate in the Appropriations Committee in 1949.

Senator HILL. Are there any further questions?

ADMINISTRATIVE ASSISTANTS FOR BOARD

Senator POTTER. Did you get that resolved about the administrative assistants for the Railroad Retirement Board?

Mr. HABERMEYER. That has not as yet been resolved. The bill is in, Senator, but the Congress has not acted on it as yet.

Senator POTTER. The problem, Mr. Chairman, is that the administrative assistants to members of the Retirement Board are not under civil service. What happens is that it denies them the benefits and protection of the civil service.

I hope we may be able to take care of it by appropriation, but I do not know.

Senator HILL. I can see it is an important matter, but I would imagine it would be a matter of legislation, would it not?

Senator POTTER. Yes, I think it probably would. Somebody could make a point of order against it, although I know of no opposition to it.

Mr. HABERMEYER. I know of no opposition to it from either railroad labor or railroad management.

Senator HILL. You might also supply for the record a statement about this matter, giving the details so that we might have it before us when we consider the bill. Is that agreeable, Senator?

Senator POTTER. Yes, that is agreeable. As I say, I know of no objection.

Mr. HARPER. It is a matter of great concern to the employees involved. It is even of more concern to the Board members because we have difficulty in getting people to give up their civil service status to act as administrative assistants to the Board. It cripples us in our ability to select capable people to serve on these jobs.

Understandably, they are hesitant to give up their long standing civil service status in order to take on jobs when the change in the Board membership might cause them to lose their jobs. It is a matter of great concern to the board and it is important to good administration of the Board to have these people restored to civil service.

Senator HILL. I appreciate fully what you have said. Has there been a bill introduced to correct this situation?

Mr. HARPER. Yes, Senator Potter has.

Senator HILL. Are there any other questions?

If not, we certainly are very much obliged to you gentlemen. Thank you very much.

NATIONAL LABOR RELATIONS BOARD

STATEMENTS OF BOYD LEEDOM, CHAIRMAN; JEROME D. FENTON, GENERAL COUNSEL; J. NEAL TOMEY, SPECIAL ASSISTANT TO THE GENERAL COUNSEL; ARTHUR H. LANG, DIRECTOR, DIVISION OF ADMINISTRATION; AND CLARENCE S. WRIGHT, BUDGET OFFICER

APPROPRIATION ESTIMATE

SALARIES AND EXPENSES

[Salaries and expenses:] For expenses necessary for the National Labor Relations Board to carry out the functions vested in it by the Labor-Management Relations Act, 1947 (29 U. S. C. 141–167), and other laws, including expenses of attendance at meetings concerned with the work of the Board when specifically authorized by the Chairman or the General Counsel; services as authorized by section 15 of the Act of August 2, 1946 (5 U. S. C. 55a); and uniforms, or allowances therefor, as authorized by the Act of September 1, 1954, as amended (5 U. S. C. 2131); [$9,384,800] *$9,985,000*: *Provided*, That no part of this appro-

priation shall be available to organize or assist in organizing agricultural laborers or used in connection with investigations, hearings, directives, or orders concerning bargaining units composed of agricultural laborers as referred to in section 2 (3) of the Act of July 5, 1935 (29 U. S. C. 152), and as amended by the Labor-Management Relations Act, 1947, and as defined in section 3 (f) of the Act of June 25, 1938 (29 U. S. C. 203), and including in said definition employees engaged in the maintenance and operation of ditches, canals, reservoirs, and waterways when maintained or operated on a mutual, nonprofit basis and at least 95 per centum of the water stored or supplied thereby is used for farming purposes.

PREPARED STATEMENT

Senator HILL. Now, Judge Leedom, Chairman, and Jerome D. Fenton, General Counsel, of the National Labor Relations Board.

Gentlemen, we will be very happy to hear your statements in connection with your appropriations.

Mr. LEEDOM. Thank you, sir.

(The formal statement of Mr. Leedom follows:)

STATEMENT ON EFFECT OF HOUSE REDUCTION IN 1959 APPROPRIATION REQUEST

The appropriation request for fiscal year 1959 for the National Labor Relations Board was $9,985,000, an increase of $600,200 over the appropriation for fiscal year 1958. The House reduced the request by the amount of $600,200 increase, approving $9,384,800 which is identical to the amount appropriated for fiscal year 1958. In recommending the lesser amount the House subcommittee did not provide guidance to the Board in determining what functions should be curtailed and still permit the Board to fulfill its statutory obligations.

This House reduction comes at the very time that the agency needs even more funds than originally requested. This will endanger the rights and protections afforded by the act to individual employees, labor organizations, and employers, and places the National Labor Relations Board in a quandary. No matter where such a cut is taken, it will cause serious delays in processing cases and will cause a more rapid buildup of the number of cases which cannot be processed because of lack of personnel.

The effect of the House reduction is more than just the elimination of a requested appropriation increase. For the first time in the history of the act, individual employees are filing charges asking for redress of wrong with greater frequency than either unions or employers; approximately 50 percent of the unfair labor practice case filings are coming from individual employees. Consequently, any reduction in the availability of the Board's services will have its greatest impact on these individuals and these unremedied wrongs can lead only to loss in employee morale and lessened productivity. Since many cases involve individuals who have suffered economic loss due to infringement of their rights by either unions or management, undue delay or failure to provide services and remedies authorized by law can only result in a serious compounding of damage to a large number of our citizens who can least afford to be hurt by Government inaction. Timeliness is an essential element in the Board's processes and the reductions in staff, which would be required if the House action is sustained, would seriously impair the fulfillment of this vital objective. The House cut would require a sizable reduction of the agency's present staff; a staff that is far too small at present to handle adequately the alltime record volume of unfair labor practice charges being filed with the National Labor Relations Board. The increases requested in the 1959 budget estimate would afford some relief but will still not meet the requirements as are now indicated by current filings.

As explained in the narrative justification of estimates accompanying this statement, the National Labor Relations Board is confronted with a rapidly rising volume of unfair labor practice case filings—a situation which developed after the President's 1959 budget had been prepared.

Agency personnel have made an outstanding effort to keep abreast of the swollen caseload. In spite of all efforts, however, the agency has been falling behind (and will continue to fall behind the remainder of this fiscal year) at a rate of approximately 300 cases every month.

The reduced appropriation would aggravate the present backlogging problem with another 1,200 cases a year. At that point with the present rate of intake, there would be almost 11,000 cases pending in the agency on June 30, 1959,

which would be equal to 1 year's case filings in the alltime record with which the agency is confronted. If this action must be taken it can only result in deferring and possibly denying relief to many individuals and groups covered by the act.

Under the present economic conditions prompt handling of labor relations matters is more important than ever to the average individual as well as to the cause of more stable and orderly national employer-employee relations. Yet, if the House reduction is permitted to stand, the delay (before an agency employee could begin to look at the case) would be much worse than any time in the history of the National Labor Relations Board and would tend to nullify the present remedies under the law. Restoration of the full amount of the reduction is urgently requested to provide the services required to be furnished by the Board now and would be the initial step in recognition of the additional requirements which are developing at the present time.

The following table shows, in terms of personnel and of funds, the significance of the House reduction:

Effect of House reduction in 1959 budget estimate

	1959 cost of present staff		1959 budget estimate		1959 House allowance		Reduction in House allowance below—			
							Present staff		1959 budget estimate	
	Average employment	Amount	Average employment	Amount	Average employment	Amount	Average employment	Amount	Average employment	Amount
Activity 1. Field investigation of cases and informal disposition of preparation for formal processing	713	$5,797,200	749	$6,024,900	678	$5,537,200	35	$260,000	71	$487,700
Activity 2. Trial examiner hearing of unfair labor practice cases	70	782,900	71	806,500	70	782,900			1	23,600
Activity 3. Board adjudication	155	1,281,500	161	1,350,000	155	1,281,500			6	68,500
Activity 4. Securing of compliance with Board orders, including enforcement through court orders	198	1,783,200	201	1,803,600	198	1,783,200			3	20,400
Grand total	1,136	9,644,800	1,182	9,985,000	1,101	9,384,800	35	260,000	81	600,200

Summary of changes

	Positions	Amount
1958 actual appropriation	1,162	$9,384,800
Deduct nonrecurring office rental costs		−23,800
Revised 1958 base	1,162	9,361,000
1959 appropriation request	1,220	9,985,000
Net change requested	+58	+624,000

Increases	1959 request to Bureau of the Budget		1959 Budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
For mandatory items:						
(1) Retirement contributions annualization (rate of 6.5 percent in 1959, 6.25 percent in 1958) (for base positions)		$17,500		$17,500		$17,500
(2) Within-grade promotions annualization (for those that have occurred or will occur during fiscal year 1958)		33,450		33,450		33,450
(3) Net cost of within-grade promotions due to be effective during fiscal year 1959		53,475		53,475		52,000
(4) Annualization costs for 5 additional positions authorized in 1958		6,050		6,050		6,050
Subtotal		110,475		110,475		109,000
For program items:						
Activity 1. Field investigations (of cases and informal disposition or preparation for formal processing)	132	1,048,725	30	196,125	−38	−290,725
Activity 2. Trial examiner hearing (of unfair labor practice cases)	21	240,550	3	45,450	1	22,000
Activity 3. Board adjudication of cases	22	165,075	6	76,125	−1	7,825
Activity 4. Securing of compliance with Board orders (including enforcement through court orders)	71	650,375	19	172,025	18	151,900
Total change requested or allowed	246	2,215,200	58	600,200	−20	

PRESENT SITUATION

Mr. LEEDOM. Lady and gentlemen of the committee, we have a story that we want to tell with a great deal of emphasis in just as few words as possible because a strange, phenomenal, unpredictable thing has happened to the work of the Labor Board. Unless we get adequate appropriations to take care of this unusual thing that has happened the whole economy of the country, I think, will suffer.

I do not want to make a speech on the philosophy of government. However, I think this area of industrial relations—where Congress has devised a law that undertakes to maintain some balance between the two forces which have fought against each other throughout the ages—this area is very important in our country.

While the Taft-Hartley Act may not be perfect, it's a reasonably good system to keep the balance fairly even.

Now, it may need some changes and I am not getting into that, but if the law——

Senator HILL. You are too wise a judge to get into that, are you not?

Mr. LEEDOM. Yes. I want to stay clear out of that, but I think everybody will admit that, compared to the enactments that have existed throughout history, this act does a reasonably good job of

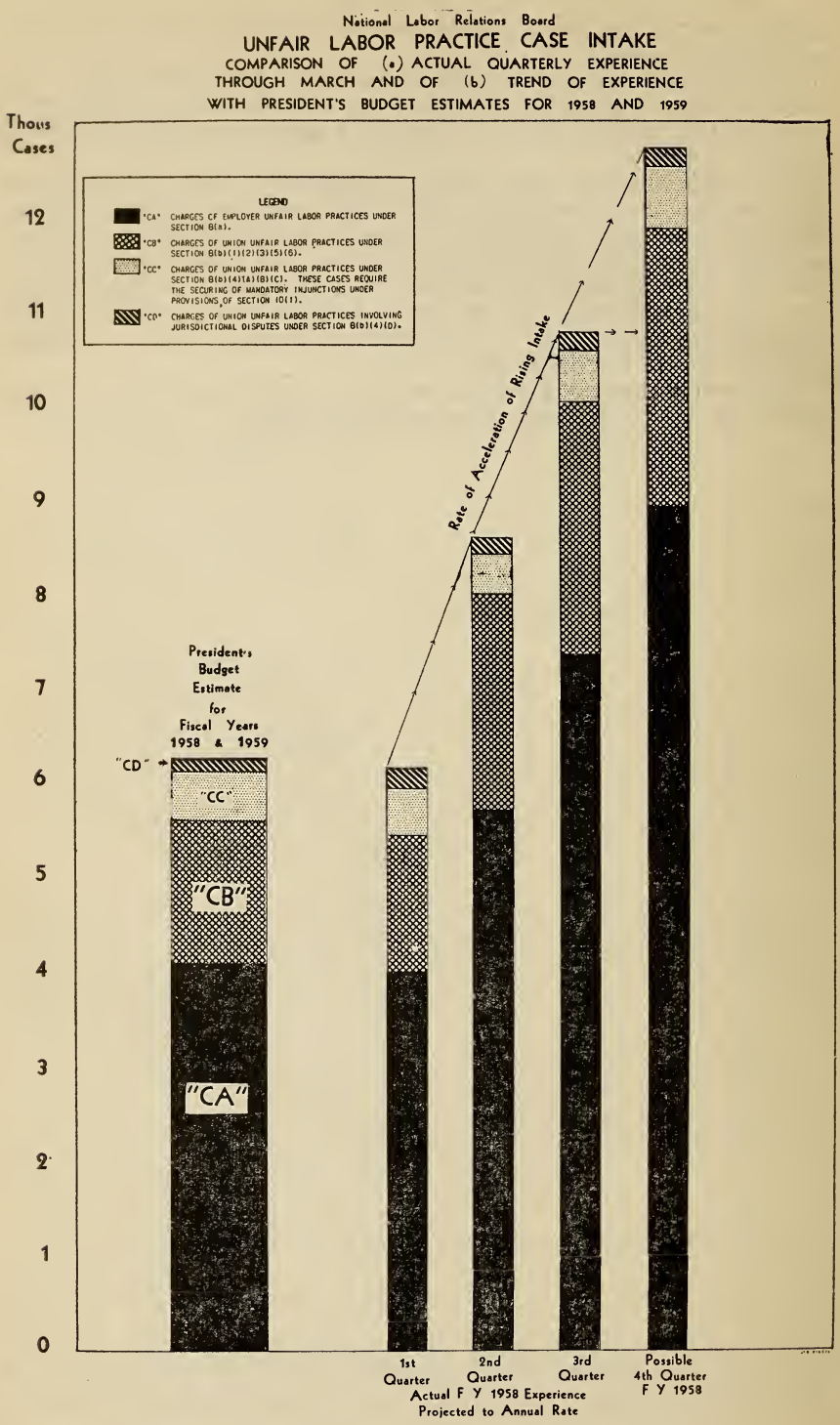
giving the working force some means of competing with the people who have property.

If the law is reasonably good, it has to be properly administered and you cannot properly administer it without adequate money.

(Here the witness displayed the chart appearing on the following page.)

Now, this unusual thing that has happened is this: On the best estimate that the Labor Board could make—and our record for making estimates predicting the inflow of cases has not been bad—on the best estimate we could make and being held down all along the way by the Bureau of the Budget and the like—the President's budget for this year, the year for which we are now seeking an appropriation—would take care of this intake of unfair labor practices cases. (Witness pointed to first bar on chart.)

The money that the President requested anticipated that we would handle an intake of complaint cases such as this.


National Labor Relations Board
UNFAIR LABOR PRACTICE CASE INTAKE
COMPARISON OF (a) ACTUAL QUARTERLY EXPERIENCE
THROUGH MARCH AND OF (b) TREND OF EXPERIENCE
WITH PRESIDENT'S BUDGET ESTIMATES FOR 1958 AND 1959
Thous Cases
0
1
2
3
4
5
6
7
8
9
10
11
12
LEGEND
"CA" CHARGES OF EMPLOYER UNFAIR LABOR PRACTICES UNDER SECTION 8(a).
"CB" CHARGES OF UNION UNFAIR LABOR PRACTICES UNDER SECTION 8(b)(1)(2)(3)(5)(6).
"CC" CHARGES OF UNION UNFAIR LABOR PRACTICES UNDER SECTION 8(b)(4)(A)(B)(C). THESE CASES REQUIRE THE SECURING OF MANDATORY INJUNCTIONS UNDER PROVISIONS OF SECTION 10(l).
"CD" CHARGES OF UNION UNFAIR LABOR PRACTICES INVOLVING JURISDICTIONAL DISPUTES UNDER SECTION 8(b)(4)(D).
Rate of Acceleration of Rising Intake
President's Budget Estimate for Fiscal Years 1958 & 1959
"CD"
"CC"
"CB"
"CA"
1st Quarter
2nd Quarter
3rd Quarter
Possible 4th Quarter F Y 1958
Actual F Y 1958 Experience
Projected to Annual Rate

INFLOW OF CASES

The unpredictable and phenomenal thing that has happened is that in the quarters that followed—in each 3-month period (of fiscal year 1958) that followed this period when we began to make this estimate—the inflow of cases has been according to this scale (pointing to the 1st, 2d, and 3d quarter bars on chart) with the result that the intake of cases by the Labor Board is far above anything that has ever happened before; and we are not able to account for it, fully.

There are many reasons given, some of them speculative. But whatever may be the reasons for this unusual inflow of cases, you can see where we are going to be if it continues.

And it has been consistent. You can see this line (pointing to rate of acceleration line on chart) is almost straight. Case intake has been consistently getting bigger and bigger.

We are hoping it will level off; but, if it levels off, it will be at a figure far in excess of what everybody anticipated originally.

Senator POTTER. Is your column on the left your estimate column?

Mr. LEEDOM. Yes.

Senator POTTER. And your other columns are by quarters?

Mr. LEEDOM. Yes.

Senator POTTER. Identify those columns better.

RESTORATION REQUESTED

Senator HILL. Judge, excuse me one minute. I think it might be of interest to the committee at this point, so that we might have the full picture before us, to call the attention of the committee to the fact that you requested of the budget $11,600,000.

Mr. LEEDOM. That is correct, sir.

Senator HILL. The budget allowed you $9,985,000. The House cut the $9,985,000 down to $9,384,800, or a reduction under the budget estimate of $600,200.

Mr. LEEDOM. That is correct, sir.

Senator HILL. I take it you are now requesting us, and I believe emphatically urging us, as you say, to restore the full budget estimate which would mean restore the $600,200; is that correct?

Mr. LEEDOM. That is correct, sir.

Senator IVES. May I raise a point there, Mr. Chairman, while you are on it?

Senator HILL. Certainly.

Senator IVES. This $11,600,000 that you have requested of the budget calls for how much additional personnel, 246?

Mr. LEEDOM. Just a moment, sir. I do not have that figure.

Mr. WRIGHT. It is 246.

Senator IVES. The House cut you down so that next year you would have 20 fewer than you have this year; is that correct?

Mr. LEEDOM. That is correct.

Senator IVES. I happen to know something about your problem. You are being subjected to a great deal of unjust criticism.

Mr. LEEDOM. Thank you.

Senator IVES. That I know. You are getting it from all aides, particularly from the labor side. How far are you behind in your caseload?

CASELOAD SITUATION

Mr. LEEDOM. Our caseload is rising rapidly.

Senator IVES. How far are you behind right now?

Mr. FENTON. We had over 5,400 cases pending at the end of February, consisting of 3,832 complaint-type cases and 1,586 representation cases.

Senator IVES. How many years will that take to clear it up?

Mr. FENTON. If we were to have a moratorium on new cases for the next 2 years, it would require that long to dispose of the current backlog.

Senator IVES. What you are facing is a delay of 3 or 4 years or more?

Mr. LEEDOM. That is right.

Senator IVES. Now, one of the chief reasons for the difficulties which we are facing in this labor-management situation is the fact that you cannot handle these cases promptly.

When we enacted the Taft-Hartley Act one of the things we thought we were doing and insisted on at the time was that all cases of this kind should be handled promptly, because nobody knows better than you do that the more rapidly the cases are handled the more success you will have in the labor-management relations.

The longer the cases are dragging out, the more disputes you get into.

Mr. LEEDOM. That is correct.

Senator IVES. Would it be possible for us to accept that amount, Mr. Chairman, the figure they requested of the budget, eleven million six?

QUESTION OF BUDGET RESPONSIBILITY

Senator HILL. That would be possible. The constitutional power to make the appropriation is in the Congress. We are very much persuaded by the Budget Bureau, but we are not bound by the Budget Bureau.

Senator IVES. I am not familiar at all with this budget situation. I do not know the conditions that exist. I will state here that I think the Congress and the Budget Bureau are primarily responsible for the condition you are in and the condition the country is in with respect to a lot of these cases.

It is not your fault, as I see it, primarily. It is our fault in one sense and the Budget Bureau in the other sense.

In this case it is more the Budget Bureau than anything else. I think the country should know that.

Mr. FENTON. Mr. Chairman, may I respond to Senator Ives?

Senator HILL. Certainly.

Mr. FENTON. The funds we requested of the Bureau of the Budget would have enabled us to meet our current workload, had we had them a year ago. We were denied those funds?

Now, our situation is so pitiful, and frankly, from an orderly Government viewpoint, so shocking, that last week in our travel funds for injunction activities, we had $78. So we had no alternative but to suspend injunction activity for a week.

Now, frankly, I am not interested in assessing fault, but I must suggest that if we are going to sustain our statutory obligation we

should have a little better fiscal attention, both from the executive branch and, frankly, from the legislative branch.

We cannot do this job as decent Americans and public servants under conditions as they exist now.

BUDGET BUREAU ACTION

Senator HILL. Let me ask this question: Do you recall, if not you can supply it for the record, what was the amount denied you by the Budget Bureau for the present fiscal year?

Mr. LEEDOM. $1,700,000.

Senator HILL. How much did you request of the Budget Bureau for the present fiscal year?

Mr. FENTON. We requested $10,550,000.

Senator HILL. For this year? I am speaking of 1958 now. I am not speaking of the fiscal year beginning July 1. I am trying to get the situation as of this year.

How much you were denied this year if you have those figures.

Mr. LANG. We requested of the Bureau of the Budget $10,550,000.

Senator HILL. That was for the present fiscal year from July 1, 1957, to July 1, 1958.

Mr. LANG. That is correct, sir. The Bureau of the Budget recommended $9,575,000.

Senator HILL. That was a reduction of practically a million dollars.

Mr. LANG. That is right, sir. The Congress appropriated $9,384,200.

Senator THYE. The question is simply this: You have a large labor force. You have a greater number of unions in existence. Every time there are charges of unfair labor practices or questions of bargaining agent recognition, there is a need for your Board to act and you must do so promptly.

Mr. LEEDOM. That is right.

Senator THYE. If you do not act the question remains unsolved?

Mr. LEEDOM. That is correct.

Senator THYE. I know, as Governor, that if you let any question go unsolved between the employer and the employee, it gathered momentum in its problems rather than diminished.

Mr. LEEDOM. That is right.

Senator THYE. For that reason, Mr. Chairman, it is incumbent upon us as Members of the Congress to recognize it and appropriate sufficient funds so that your workload is current, because only in that manner will you administer as you should.

If you are dragging many months behind in your administrative functions as a board, why, you just keep a question unresolved.

Mr. LEEDOM. Right. We appreciate that attitude.

SUPPLEMENTAL REQUEST

Mr. FENTON. Mr. Chairman, in full fairness to the Bureau of the Budget, I will say that they are currently examining our requirements for a supplemental appropriation for the next fiscal year. These requirements are in excess of a million dollars.

So the restoration of these funds that we seek this morning is only a fragmentary step in the right direction of giving us the money to discharge our statutory responsibilities.

Senator SMITH. Are conditions any different today when we are considering a supplemental than they were when they were considering this first request?

Mr. FENTON. Yes; there are a number of new factors.

Senator SMITH. To the extent of the difference that they made in the recommendation.

Mr. FENTON. Yes; and even more so. I think that a most important new factor is the economic imbalance in which the country finds itself.

Every economic imbalance in the last 7 years has had a marked impact on our caseload. The more unemployment the greater the impact of complaints alleging unfair labor practices. This last month we have had 1,000 cases in contrast to a normal of 500.

An analysis of those cases would indicate that the economic imbalance of men getting laid off or reduced in force or getting a lower rated job produces more and more cases for us.

That is one new ingredient that the Bureau of the Budget now has under consideration that it did not have the full benefit of when our estimates were reviewed last fall.

Senator SMITH. Have they given you any estimate as to what that supplemental will be?

Mr. FENTON. I have some reluctance to invade the prerogative of the Bureau of the Budget, but I know realistically we need in excess of a million dollars.

Senator SMITH. You needed that in the first place in connection with the original request you made?

Mr. FENTON. That is right.

Mr. LEEDOM. In connection with that, I might say that our request was based on the inflow of cases that came from our field people. We accepted that estimate and urged it on the Bureau of the Budget, but it was not solid enough to suit them.

As it turns out this field estimate of what was going to happen was better than any figures that we could produce or that the Budget Bureau was satisfied with. The inflow of cases is so unpredictable that you can hardly blame anybody.

Senator IVES. You are now talking about something that you had not anticipated to too great an extent?

Mr. LEEDOM. You might say we anticipated it in a way, but we could not substantitate it.

QUESTION OF POLICY

Senator IVES. Here is a question that apparently you made a policy on that I do not quite understand, that is all of it. The point of it is, you are not taking on labor relations beyond a certain level. You are dropping them off.

Now why is that? You are taking them on down to a certain point and then you level off somewhere and you leave a certain number of cases in those areas where the State cannot take them because of the Supreme Court decision, in what we call the no man's land.

That has caused a lot of this racketeering which we have had, a great deal of it, gangsterism, allowed them to get in.

Why is it you cannot take cases at a lower point than you are now taking?

Mr. LEEDOM. Budgetary reasons.

Senator IVES. Did you ask in this request of $11,600,000 to go down lower and take them all?

Mr. LEEDOM. No; that request did not anticipate extending our jurisdiction, but we have been considering extending our jurisdiction.

Senator IVES. I know you have. How far down are you going to extend it?

Mr. LEEDOM. That is difficult to say, but I would say that our preliminary effort has been directed toward maybe another 20 percent of our present workload.

Senator IVES. How many would that leave still uncovered?

Mr. LEEDOM. That is an impossible figure to state.

Senator IVES. You have no idea?

Mr. LEEDOM. No; I have no idea.

Senator IVES. You must have some idea from the requests and complaints you get?

Mr. LEEDOM. It leaves a very wide area still in no man's land where a labor dispute has no forum for settlement.

Senator IVES. We have legislation in to cover this situation, but they are all amendments of Taft-Hartley. It is very dubious in my judgment that we will get any amendment to Taft-Hartley during this session.

In the meantime, this situation becomes more aggravated.

ADDITIONAL FUNDS NEEDED

In your judgment how much larger appropriation will you need—I am not talking about what you were granted—how much larger appropriation will you need than this $11,600,000 in order to take on 20 percent additional cases?

Mr. LEEDOM. Another million and a half.

Senator IVES. That will take you up to $13.1 million. Can you do the job on that basis?

Mr. LEEDOM. We think we can.

Senator IVES. There you are, Mr. Chairman. That is more or less an answer to the problem that we face in this field.

Mr. LEEDOM. This is a concrete problem in which, I think, we should not be penurious. It is an important problem.

Senator IVES. It is a vital problem.

Mr. LEEDOM. It is a vital problem.

Senator IVES. Otherwise your whole Taft-Hartley Act is breaking down and everything we intended to accomplish by it is lost almost.

Mr. LEEDOM. That is right.

Senator POTTER. Would this additional million and a half dollars take care of all the cases in the so-called twilight zone?

Mr. LEEDOM. No, sir.

Senator POTTER. Only 20 percent?

Mr. LEEDOM. It would increase our present workload another 20 percent. It is impossible to say how much of no-man's land we would be filling with that 20 percent, by taking on that additional 20 percent workload.

Mr. FENTON. The restoration of these funds we seek today will not touch any of the cases that would arise as a result of changes in jurisdiction standards. Likewise, the supplemental we are seeking and the

Bureau of the Budget is currently considering in excess of a million dollars will not touch the so-called no man's land.

Assuming we get the monetary ingredients I have discussed, and assuming that we are to lower our jurisdiction we will still need another million and a half dollars.

Senator HILL. Have you any intimation or any word from the budget as to when they may resolve this consideration they are now giving to a supplemental?

CHANGE OF ATTITUTE OF BUDGET BUREAU

Mr. LEEDOM. I would say that the Bureau of the Budget is very much aware of our problem, very sympathetic, and working on it with rapidity.

Senator IVES. I do not think they are half as aware as some of us here are. If they were, you would get more money.

Mr. LEEDOM. I can tell you in their dealing with us there has been a complete change of attitude when they saw the figures that produced the chart which you have just seen—the unusual inflow of cases. We gave some consideration, and I think it is fair to say they gave some consideration, to the proposition which you have suggested—that there be an amendment to the bill here rather than a supplemental. But we felt this would perhaps invade someone else's prerogatives.

Senator IVES. The better course would be to have them step up their own estimate so that we would have something to operate on. Now, they should up their estimate to the total of $13,100,000, not eleven million six.

Senator POTTER. This idea of going through one bill, knowing that a supplemental is right behind it, is not the honest way to act.

If you folks need the money and the Congress decides that this is necessary, and we brag that we are passing a low appropriation bill knowing that a supplemental is following right on its tail, it is a little deceitful.

Whether or not the Budget Bureau considers it, in our own judgment it is needed, we should put it in the bill.

Senator THYE. Will you need a deficiency between now and the end of the fiscal year.

Mr. LEEDOM. We do need one, but I don't think we can get it in time to help us.

Senator THYE. This is now April 3, and you still have the balance of this fiscal year.

Mr. LEEDOM. That is right.

Senator THYE. You have a backlog and last week you were short of funds.

Mr. FENTON. We are short every week. Last week was a crisis.

Senator THYE. Will you improve now as you enter the last quarter?

Mr. FENTON. No; it is getting graver. In the light of Senator Potter's comment, I think, to be candid with your committee here this morning, we should point out that we urged upon the Bureau of the Budget a proposal for preventing a deficiency for the current fiscal year, but it was not approved.

We failed to translate the sense of urgency that apparently you gentlemen have grasped this morning.

Senator THYE. If you have insufficient funds to move as you should as a board, then your services are hampered?

Mr. FENTON. That is quite correct, sir.

Senator THYE. Because if you must travel or if someone within your division should be traveling and you have no funds, you are not functioning properly.

Mr. FENTON. That is right.

Senator THYE. The overhead of the agency then becomes an absolute loss when you cannot function properly.

Mr. FENTON. That is correct, sir.

PERSONNEL PROCUREMENT

Senator HILL. Do you think you would have much difficulty in getting the additional people you need if you had the funds?

Mr. LEEDOM. It is not easy to hire lawyers, but we will get them.

Senator HILL. What would be the average salary that you pay a lawyer today?

Mr. FENTON. While we are looking that up, I might tell you, Mr. Chairman, that approximately 80 cents of every dollar we spend is for salaries and other expenses for personnel.

Senator HILL. Is for personnel?

Mr. FENTON. Yes, sir.

Senator THYE. I could recommend two good lawyers.

Mr. FENTON. I would like to have a recommendation.

Senator THYE. Our former chief justice of Minnesota, Chief Justice Loring. He is as physically hale and hearty as I am, or you are, at least from your appearance, sir.

Mr. FENTON. Thank you for the generous compliment, but looks are deceiving; I am really in a depressed state. I never had it so bad.

Senator THYE. And the chief justice has got one of the best minds that I know of and he would be ready to go to work tomorrow morning, I believe.

Chief Justice Loring has retired from the bench of Minnesota.

Mr. LEEDOM. I am acquainted with him. He is a fine man.

Senator THYE. You do not get a better man.

Mr. LEEDOM. He has a good knowledge of labor law. The only thing is we don't have many jobs that will fit the dignity and capacity of Judge Loring.

Senator HILL. What would that pay, Judge?

Mr. LEEDOM. The average would be something under $6,000.

Senator HILL. Under $6,000?

Mr. LEEDOM. Under six.

Senator HILL. For a lawyer?

Mr. LEEDOM. We start our lawyers out—young lawyers we start at $4,500 and they work up slowly.

Senator THYE. Sir, you just offer Judge Loring an opportunity and I think he will serve your country if you want him.

Mr. LEEDOM. I know the judge. He is suffering under retirement.

Senator THYE. I know he is. He retired. Physically he looked like a man of 55, but he was forced off the bench by the retirement act of Minnesota.

I would say he would come on at the salary you now make mention of and I think he would render you good service.

Mr. LEEDOM. That is a very good suggestion. We will look into that.

PERSONNEL SITUATION

Senator HILL. As I understand, what you request is for at least 246 additional?

Mr. LEEDOM. That is what is covered in our initial request for this fiscal year.

Senator HILL. That is only for the request you made last fall?

Mr. LEEDOM. That is right, sir.

Senator HILL. The effect of the House amount would be not only not to allow you any additional employees, but to make a reduction?

Mr. LEEDOM. Correct.

Mr. FENTON. We would be forced to cut our staff.

Senator HILL. I know the House had very little comment. Did you have an opportunity to present your case pretty fully over there?

Mr. FENTON. We thought we did, but apparently it was just not our day, Senator.

Senator HILL. I notice you said that was not your day. You did not say this was not your court. I ask that, not that I want to bring the House in this matter, but you gentlemen are bound to realize this, that whatever this committee or the Senate may see fit to do, if there is a difference between the House and Senate we have to go to a conference committee, so the House comes back into this picture.

Mr. FENTON. May I make another observation at this point?

Senator HILL. Yes, sir.

Mr. FENTON. If we are going to be at all effective in obtaining the right kind of people we should begin to recruit and hire now, if you will, in order to be ready for the new fiscal year.

So the faster the action on restoration the better our opportunity is to tool up in terms of people to try to do the job.

Senator IVES. Mr. Chairman, in this connection, speaking again of no man's land, if you take on a 20-percent increase in our load, how many more personnel will you have to have? You have 246 here now. I assume you would need substantially more than that.

Mr. LEEDOM. Maybe another 50 people and maybe some more.

Senator IVES. Yet you are spending here an extra million and a half dollars?

Mr. LEEDOM. Just a moment, let me check.

I beg your pardon. The figure is 250 additional people, sir.

Senator IVES. Plus the 246?

Mr. LEEDOM. Yes, sir.

Senator IVES. It will be 496?

Mr. LEEDOM. Yes, sir.

Senator THYE. Do they all have to be lawyers?

Mr. LEEDOM. No; we use some nonlawyers.

Senator THYE. I was going to say, some of the best conciliators I witnessed were not always lawyers. I am not casting any reflection on my lawyer friends.

Mr. FENTON. May I interject to say that we are forbidden to conciliate under the terms of the act.

Senator HILL. I know. We have the Mediation Conciliation Service for that purpose.

Now, another thing that you gentlemen realize is this:

Funds in this bill do not become available until July 1.

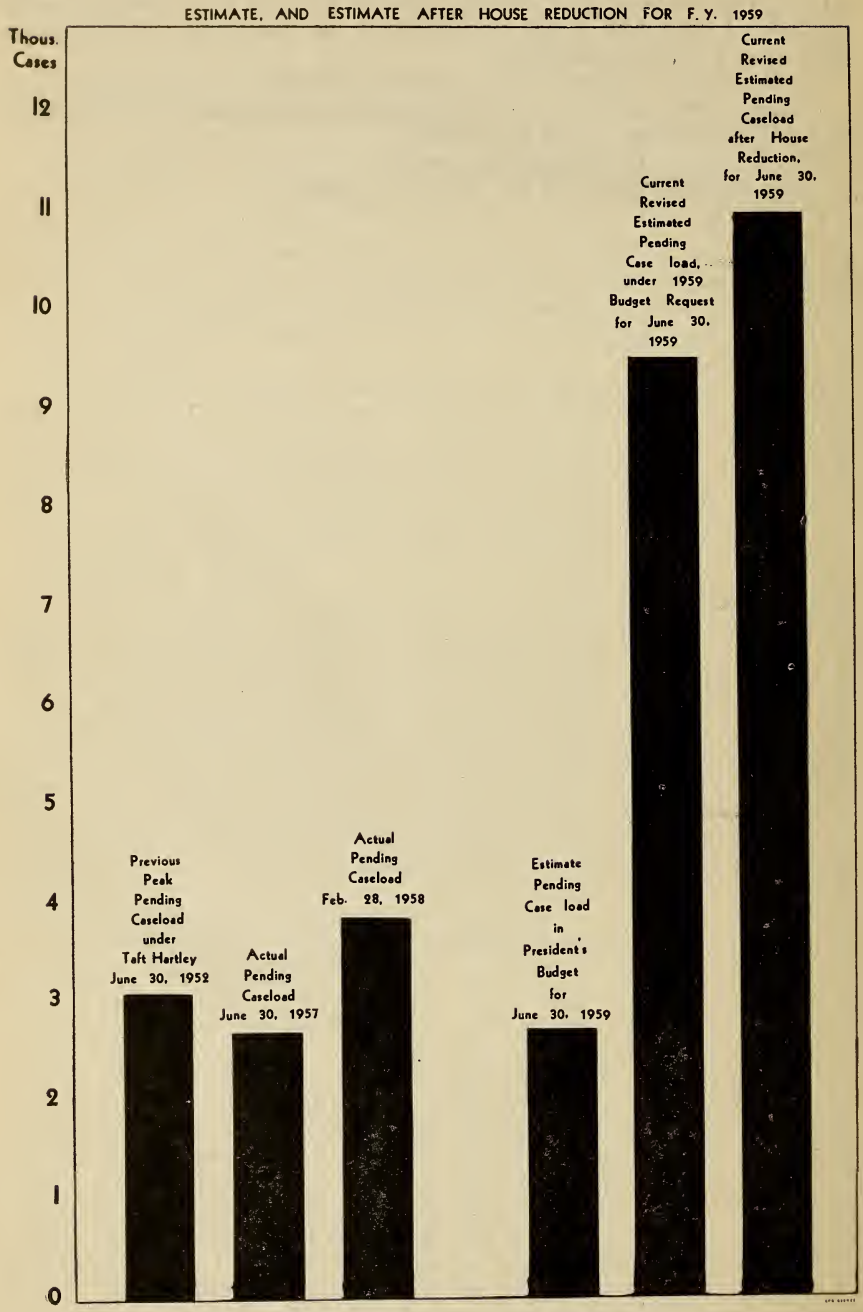
Mr. FENTON. I realize that. Yesterday I turned down a man who, if I could have held out the promise of a job July 1, would have waited. I told him I did not know if we would have the money July 1, so I turned him down.

That is typical of our daily behavior and will be until July 1.

Senator HILL. Judge, you presented your chart and we interrupted you with questions. Did you finish?

Mr. LEEDOM. I have another chart.

(The witness presented the following chart:)


National Labor Relations Board
UNFAIR LABOR PRACTICE PENDING CASELOAD
COMPARSION OF PREVIOUS EXPERIENCE
WITH PRESIDENT'S BUDGET, CURRENT REVISED
ESTIMATE, AND ESTIMATE AFTER HOUSE REDUCTION FOR F. Y. 1959
Thous. Cases
12
11
10
9
8
7
6
5
4
3
2
1
0
Previous Peak Pending Caseload under Taft Hartley June 30, 1952
Actual Pending Caseload June 30, 1957
Actual Pending Caseload Feb. 28, 1958
Estimate Pending Case load in President's Budget for June 30, 1959
Current Revised Estimated Pending Case load, under 1959 Budget Request for June 30, 1959
Current Revised Estimated Pending Caseload after House Reduction, for June 30, 1959

PENDING CASELOAD

Senator HILL. Could you have the charts fixed for us so that we can present them to the committee?

Mr. LEEDOM. Yes, I think we have copies that may go in the record.

This chart shows our pending caseload over the years. The highest pending caseload we ever had under Taft-Hartley was here in 1952—the highest load of epnding cases (the witness pointed to the first bar on the chart).

By 1957, June 30, we had reduced the pending caseload to this lower figure (pointing to the second bar). By the end of the latest full month, February 28, 1958, that pending caseload had risen this high (pointing to the third bar on chart).

The President's budget for this fiscal year was designed on our holding at this level [pointing to the fourth bar on chart]. So if we had gotten what the President had recommended and if the House had not cut us and the cases had not started to flow——

Senator HILL. You mean if you had gotten the additional $600,200?

Mr. LEEDOM. That is right. With the President's budget and if these other things had not happened, the pending caseload on June 30, 1959, would be as shown by the fourth bar—that is, equal to June 30, 1957, experience. However, with the increase of cases that we now know about, even with the President's full budget request, the pending load on June 30, 1959, will be all the way up here [witness pointed to the second bar from the right on the chart].

Senator HILL. The additional $600,200?

Mr. LEEDOM. Yes. We would go to there, which is a horrible rise. It is more than three times as high as our previous peak pending load experience.

If we are denied restoration of the amount the House cut us, it will go that much higher [pointing to the extreme right-hand bar on the chart].

Senator HILL. You are speaking now really of your backlog?

Mr. LEEDOM. Yes.

Senator HILL. When you speak of the load, what you really mean is the load you cannot carry with your existing personnel?

Mr. LEEDOM. Correct.

Of course, there is this about it: there will always be a little backlog in our business, but this was considered a controllable situation certainly (pointing to the estimated pending caseload in President's budget for June 30, 1959). This was not even too bad (pointing to previous peak pending caseload). This was better (pointing to actual pending caseload June 30, 1957). Then the cases started to come.

QUESTION OF REVISED ADMINISTRATIVE PRACTICES

Senator POTTER. Let me ask you this, if I may:

Have you reviewed your administrative practices to find out if you are utilizing your talents as effectively as possible to handle more cases in a shorter period of time?

Mr. LEEDOM. Yes, sir, we have. We have not only reviewed it, but we have put in some effective improvements, we think, so that we get better results out of each man's work.

Senator POTTER. It might be well if you have done somthing like that to have it in the record, for this reason: If we go to bat to ask for additional funds to take care of the big backlog that you now have, I think it is well to know that you are trying to upgrade as effectively and as efficiently as possible.

(The following statement was supplied:)

STATEMENT ON IMPROVEMENTS IN ADMINISTRATIVE PRACTICES

Over the past 2 years the Board has undertaken a continuous review of its own operations in an effort to relieve the basic problems of backlog, time delay, and productivity.

It has established a standing Review Committee consisting of the Chief Counsels, the Executive Secretary, and the Director, Division of Administration, with basic responsibilities to report on such problems and to make recommendations for improvements in Board operations and procedure.

One example of the type of major improvement instituted under this review involves a restoration of the three-member panel system authorized under section 3 (b) of the act. This has served to expedite issuance of decisions.

Another example is a special procedure for processing short-form representation cases. As a consequence of substantially shortening the total time required for issuing these decisions under this procedure, more legal assistant manpower is now available for processing contested unfair labor practice decisions awaiting issuance.

The committee is now awaiting results of a special time study involving all manpower components utilized in decisional processing at the Board level. This data should enable the committee and the Board to study and determine more effective utilization of manpower within the Board members staffs.

Above all, the Board, by taking a direct interest in these matters, has succeeded in communicating its concern and desire for improvement to the staff. As a result, we have experienced a sustained increase in productivity over the past year.

The General Counsel has placed particular emphasis on improved case-handling procedures in an effort to bring about greater productivity and at the same time provide for accurracy, objectivity, and commonsense in the investigation of cases. An example of this action was the installation, in certain regional offices, of a system whereby case assignments are made to teams of examiners and attorneys under the immediate supervision of a senior attorney. The plan is designed to expedite the early case-handling processes and to minimize duplicity in the later stages. Attorneys participate in the investigation of the more complex cases and those where a complaint is likely to issue, thus saving considerable review time. Under this system, the attorney who will try the case or make the substantive legal evaluations has actively participated in the investigation. This system will continue to be studied to determine whether it may be extended to additional areas and if further refinements in its application are desirable.

The geographical areas to be covered in the respective regional offices are reviewed periodically in order to meet the needs of the public as indicated by the filing of cases. During the past year, regional offices were established in Tampa, Fla., and in Newark, N. J., to bring improved and more accessible services to those requiring the facilities of the agency. The establishment of subregional offices and the assignment of resident agents are made in consonance with the caseload requirements of the respective areas. In all such cases, improved procedures, as well as economies of operation, are prime considerations in determining actions taken.

Mr. LEEDOM. All right.

One thing that the Board has done within the past 18 months is to begin to decide complaint cases, those reflected in this chart, by panels of 3, rather than all 5 members sitting on every case. That has proved to speed up our output of cases somewhat.

We have also done other things in the field operations.

On top of all that the Bureau of the Budget has agreed to finance a survey of our operation so if there are more improvements to be discovered we will discover them and put them into effect.

Mr. FENTON. Senator Potter, the charts and figures in the material before your committee will indicate the increases in productivity of our professional staff although we have not tried to dramatize them orally.

Senator HILL. With that statement you have this breakdown. All this, of course, will go in the record.

Are there any other questions?

Is there anything you would like to add, Judge?

Mr. LEEDOM. I cannot think of anything, sir.

Mr. FENTON. There is something you can add, Mr. Chairman.

Senator HILL. Have you anything to add, Mr. Fenton?

Mr. FENTON. Except a "Good morning."

Senator HILL. You gentlemen have made a good presentation. I note you two, two of your very able assistants, Arthur Lang, Division of the Administration, and Clarence Wright, Chief of the Budget Branch. We are glad to have all of you here.

NATIONAL MEDIATION BOARD

STATEMENTS OF FRANCIS A. O'NEILL, Jr., CHAIRMAN; EUGENE C. THOMPSON, EXECUTIVE SECRETARY; AND THOMAS A. TRACY, ASSISTANT EXECUTIVE SECRETARY

APPROPRIATION ESTIMATE

SALARIES AND EXPENSES

[Salaries and expenses:] For expenses necessary for the National Mediation Board, including stenographic reporting services as authorized by section 15 of the Act of August 2, 1946 (5 U. S. C. 55a), $520,000.

Program and financing

	1957 actual	1958 estimate	1959 estimate
Program by activities:			
1. Mediation	$426,181	$479,000	$479,000
2. Administration	37,000	41,000	41,000
Total obligations	463,181	520,000	520,000
Financing: Unobligated balance no longer available	12,319		
New obligational authority	475,500	520,000	520,000
New obligational authority:			
Appropriation	$460,000	$520,000	$520,000
Transferred from "Salaries and expenses," National Railroad Adjustment Board (71 Stat. 183)	15,500		
Appropriation (adjusted)	475,500	520,000	520,000

Mediation cases

	1956 actual	1957 actual	1958 estimate	1959 estimate
Cases pending, start of year	197	243	304	300
Cases received during year	500	550	500	500
Cases closed during year	454	489	504	500
Cases pending, end of year	243	304	300	300

Object classification

	1957 actual	1958 estimate	1959 estimate
Total number of permanent positions	39	40	40
Average number of all employees	36	40	40
Number of employees at end of year	36	40	40
Average GS grade and salary	11.3 $8,159	11.2 $7,980	11.2 $8,016
01 Personal services:			
Permanent positions	$336,785	$353,550	$353,550
Other personal services		1,150	1,150
Total personal services	336,785	354,700	354,700
02 Travel	104,279	120,000	120,000
03 Transportation of things	50	50	50
04 Communication services	13,904	13,550	13,550
06 Printing and reproduction	4,233	3,000	3,000
07 Other contractual services		2,700	2,700
08 Supplies and materials	3,608	2,500	2,500
09 Equipment	322		
11 Grants, subsidies, and contributions		23,500	23,500
Total obligations	463,181	520,000	520,000

APPROPRIATION ESTIMATE

Arbitration and Emergency Boards

[Arbitration and emergency boards:] For expenses necessary for arbitration boards established under section 7 of the Railway Labor Act, as amended (45 U. S. C. 157), and emergency boards appointed by the President pursuant to section 10 of said Act (45 U. S. C. 160), including stenographic reporting services as authorized by section 15 of the Act of August 2, 1946 (5 U. S. C. 55a), $250,000.

Program and financing

	1957 actual	1958 estimate	1959 estimate
Program by activities:			
1. Voluntary arbitration	$175,255	$166,000	$166,000
2. Investigations of emergency disputes	50,962	54,000	84,000
Total obligations	226,217	220,000	250,000
Financing: Unobligated balance no longer available	23,783	30,000	
Appropriation (new obligational authority)	250,000	250,000	250,000

Number of boards

	1956 actual	1957 actual	1958 estimate	1959 estimate
Arbitration boards	6	12	12	12
Special adjustment boards	42	54	75	75
Emergency boards	5	3	3	3

Object classification

	1957 actual	1958 estimate	1959 estimate
Average number of all employees	10	10	10
Number of employees at end of year	8	11	11
01 Personal services: Positions other than permanent	$180,578	$173,000	$198,000
02 Travel	24,771	30,000	35,000
05 Rents and utility services	17,163	15,000	15,000
06 Printing and reproduction	1,500	2,000	2,000
07 Other contractual services	2,205		
Total obligations	226,217	220,000	250,000

APPROPRIATION ESTIMATE

Salaries and Expenses

[Salaries and expenses:] For expenses necessary for the National Railroad Adjustment Board, including stenographic reporting services as authorized by section 15 of the Act of August 2, 1946 (5 U. S. C. 55a), $525,000, of which not less than [$155,000] *$172,000* shall be available for compensation (at rates not in excess of $75 per diem) and expenses of referees appointed pursuant to section 3 of the Railway Labor Act, as amended.

Program and financing

	1957 actual	1958 estimate	1959 estimate
Program by activities:			
Adjustment of grievances:			
(a) Train service employees	$157,790	$178,500	$178,500
(b) Shop employees	114,966	116,500	116,500
(c) Other nonoperating employees	161,273	180,600	180,600
(d) Marine employees	42,110	49,400	49,400
Total obligations	476,139	525,000	525,000
Financing: Unobligated balance no longer available	10,361		
New obligational authority	486,500	525,000	525,000
New obligational authority:			
Appropriation	502,000	525,000	525,000
Transferred to "Salaries and expenses," National Mediation Board (71 Stat. 183)	−15,500		
Appropriation (adjusted)	486,500	525,000	525,000

Workload

Cases	1956 actual	1957 actual	1958 estimate	1959 estimate
Pending, beginning of year	3,724	4,707	4,317	4,662
Received during year	2,409	1,992	2,070	2,115
Closed during year	1,426	2,382	1,725	1,940
Pending, end of year	4,707	4,317	4,662	4,837

Object classification

	1957 actual	1958 estimate	1959 estimate
Total number of permanent positions	49	50	50
Full-time equivalent of all other positions	7	7	8
Average number of all employees	55	56	58
Number of employees at end of year	65	61	62
Average GS grade and salary	7.2 $5,230	7.2 $5,155	7.2 $5,214
01 Personal services:			
Permanent positions	$252,784	$254,000	$257,000
Positions other than permanent	126,881	129,600	144,600
Other personal services		1,000	1,000
Total personal services	379,665	384,600	402,600
02 Travel	23,669	24,500	26,500
03 Transportation of things	81	100	100
04 Communication services	8,728	8,500	8,700
06 Printing and reproduction	48,594	69,000	49,000
07 Other contractual services	3,320	3,000	3,500
08 Supplies and materials	5,988	6,000	6,000
09 Equipment	4,632	9,800	9,100
11 Grants, subsidies, and contributions		17,100	17,100
15 Taxes and assessments	1,462	2,400	2,400
Total obligations	476,139	525,000	525,000

PREPARED STATEMENT

Senator HILL. Now we will go to the National Mediation Board.

We are delighted to have you gentlemen here with us this morning.

Mr. O'NEILL. Mr. Chairman, members of the committee, we appreciate this opportunity to more or less render an account of our stewardship.

I have prepared a statement, copies of which have been given to the clerk of the committee. I would ask that it be incorporated in the record rather than going through it. I think most of the members of the committee are fairly well familiar with the operations of the National Mediation Board.

Senator HILL. We will place it in the record in full.

Mr. O'NEILL. Thank you, Mr. Chairman.

(The statement referred to follows:)

The National Mediation Board is the agency designated by Congress to administer the Railway Labor Act. This legislation has been in effect since 1934. It establishes the duties of parties and enunciates procedures for the orderly handling of labor-relations problems arising in both the railroad and airline industries.

The fiscal year 1959 will be the 25th year of operation of the present board and the 33d year of the Railway Labor Act. The primary duty of the National Mediation Board is that of mediating disputes between labor and management in the rail and air transport industries concerning changes in rates of pay, rules, and working conditions. This Board is also charged with the duty of resolving representation disputes arising among the employees of the rail and air carriers by conducting ballot-box elections, or making checks of the signatures on authorization cards.

Another duty of the Board is the naming of referees to sit with the various divisions of the National Railroad Adjustment Board, and the appointment of neutrals to arbitration boards, when called upon to do so. The Board also certifies to the President disputes involving rail or air carriers and their employees which in the judgment of the Mediation Board threaten to deprive a substantial portion of the country of essential transportation service. There are currently a little less than 1 million railroad employees and about 150,000 airline employees.

The total authorized personnel of the Board is 40 employees including 3 members appointed by the President and confirmed by the Senate; the remaining are classified civil-service employees.

Our budget request for salaries and expenses contemplates an expenditure of $520,000, which is the same amount that was appropriated by the Congress for the current year. No additions to the force of employees is contemplated.

The estimate for the arbitration and emergency boards is a contingent fund and any unexpended amount at the end of the year is returned to the Treasury. It is quite difficult to forecast with any degree of accuracy the number of boards which may be required in any fiscal year, as this depends on emergency situations threatening interstate commerce. We are asking for $250,000 for this fund for fiscal 1959, the same amount we have for fiscal 1958.

For the National Railroad Adjustment Board the Bureau of the Budget has allowed them $525,000. This also is the same amount that was appropriated for the current year.

ACCEPTANCE OF BUDGET AND HOUSE ACTION

Mr. O'NEILL. Our budget request this year amounts to $520,000. That is broken down into the figure for our salary and expenses and for arbitration and emergency boards.

It is the exact figure, Mr. Chairman, of the amount appropriated by the Congress for us during fiscal 1958.

We feel that we can get along on that sum. We so told the House committee and they went along with us on that figure.

Senator HILL. They gave you the budget estimate which was the amount you supported before them?

Mr. O'NEILL. That is correct, and the House did not cut us, in other words.

Senator HILL. And the budget gave you the amount that you requested?

Mr. O'NEILL. No; the budget cut us about $17,000.

Senator HILL. They cut you $17,250?

Mr. O'NEILL. That is correct, sir.

We accepted that cut. We will perhaps not be able to fill out our complement, but we are not quarreling with that. We feel we can get along with that figure.

The 1 item in our budget of $250,000 is a contingent fund for arbitration and emergency boards. Fortunately, we have not had many emergency boards this years. We try to keep them to a minimum. I might advise the committee any sums that are unexpended from that fund are turned back to the Treasury. In previous years we have turned some of that money back.

PROCEDURE OF EMERGENCY BOARDS

Senator POTTER. When you have the emergency board convenient, where do you get your personnel to sit on the board?

Mr. O'NEILL. The emergency board members are appointed by the President, Senator.

Senator POTTER. They are appointed for that specific case?

Mr. O'NEILL. That is correct. It is a 60-day operation.

Senator POTTER. They are on a per diem?

Mr. O'NEILL. That is correct. Their fee is $100 a day, plus $12 per diem. The arbitrators and referees under the act are appointed by the National Mediation Board.

Senator POTTER. You have a panel of prospective members you submit to the President?

Mr. O'NEILL. Of course, only when we are asked, when there is a request made as to what we think of a particular type of man, why, we give them the information we have on him. As I say, that function is with the Chief Executive, it is not with us.

Senator HILL. Are there any other questions, gentlemen?

RAILROAD ADJUSTMENT BOARD

Mr. O'NEILL. Mr. Chairman, the members of the Railroad Adjustment Board are here and to save perhaps the time of the committee, I can present their case as well.

Their situation is exactly the same as ours. The figure they asked for was approved by the House committee.

It also represents the exact figure that was appropriated by the Congress in fiscal 1958. I do not know that the committee wants to inquire into the operations of that Board.

Senator HILL. It does represent a reduction of the amount they requested of the budget?

Mr. O'NEILL. That is correct.

Senator HILL. Some $62,000.

WORK OF BOARD

Senator POTTER. Just what does the National Railroad Adjustment Board do?

Mr. O'NEILL. The National Railroad Adjustment Board consists of 36 members, 18 of which represent labor, and 18 represent management.

The salaries of the members of that Board are paid by the railroads and by the unions whose representatives sit on that Board.

The Board hears disputes arising out of the interpretation of agreements reached under the Railway Labor Act. The grievance comes up to that Board and they consider the grievance and try to reach a decision on it.

If no decision is reached, it goes to a neutral member. The law provides for the breaking of a deadlock by a referee. They either agree on a referee or the law provides they ask the Mediation Board to appoint the referee.

The referee sits as the 11th member of the First Division and an award comes down.

Senator POTTER. In other words, it is really to mediate labor disputes, it has nothing to do with the railroad retirement?

Mr. O'NIELL. No; they do not mediate disputes. They decide issues arising out of the interpretation of the agreement. The Mediation Board does the mediating and conciliating in the railroad field.

Senator HILL. Now, the Board feels that they can operate efficiently on the amount that the budget recommended and the House allowed?

Mr. O'NEILL. That is correct, sir.

Senator HILL. Are there any other questions, gentlemen?

If not, we want to thank you very much.

Mr. O'NEILL. Thank you, Mr. Chairman.

Senator HILL. Now, the Federal Mediation and Conciliation Service.

We are glad to have you here, Mr. Finnegan, with the members of your staff. We will be glad to have you proceed in your own way, sir.

FEDERAL MEDIATION AND CONCILIATION SERVICE

STATEMENTS OF JOSEPH F. FINNEGAN, DIRECTOR; ROBERT H. MOORE, DEPUTY DIRECTOR; WALTER A. MAGGIOLO, DIRECTOR MEDIATION ACTIVITY; L. E. EADY, DIRECTOR, ADMINISTRATIVE MANAGEMENT; AND JOHN G. FLANAGAN, CHIEF, BUDGET AND FINANCE DIVISION

APPROPRIATION ESTIMATE

SALARIES AND EXPENSES

[Salaries and expenses:] For expenses necessary for the Service to carry out the functions vested in it by the Labor-Management Relations Act, 1947 (29 U. S. C. 171–180, 182), including expenses of the Labor-Management Panel as provided in section 205 of said Act; expenses of boards of inquiry appointed by the President pursuant to section 206 of said Act; temporary employment of arbitrators, conciliators, and mediators on labor relations at rates not in excess of $75 per diem; Government-listed telephones in private residences and private apartments for official use in cities where mediators are officially stationed, but no Federal Mediation and Conciliation Service office is maintained; [purchase of one

passenger motor vehicle for replacement only at not to exceed $3,000;] expenses of attendance at meetings concerned with labor and industrial relations; and services as authorized by section 15 of the Act of August 2, 1946 (5 U. S. C. 55a); [$3,550,000] *$3,695,000.*

Obligations by activities

Description	Estimate, 1958	Proposed, 1959	House allowance
1. Mediation and conciliation of labor disputes	$3,258,162	$3,394,945	$3,349,945
2. Presidential boards of inquiry	5,000	5,000	5,000
3. Administration	286,838	295,055	295,055
Total estimated obligations	3,550,000	3,695,000	3,650,000

Description	Estimate, 1958		Proposed, 1959		House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
Total departmental	50.0	$324,280	50.0	$327,515	50.0	$327,515
Total field	293.0	2,516,745	297.0	2,562,720	292.0	2,524,720
Total permanent:						
Positions	343.0	2,841,025	347.0	2,890,235	342.0	2,852,235
Deduct lapses	−5.4	−46,025	−1.7	−7,335	1.7	−7,335
Net permanent positions	337.6	2,795,000	345.3	1,882,900	340.3	2,844,900
Part-time and temporary positions	4.1	22,300	4.1	22,300	4.1	22,300
Regular pay in excess of 52-week base	--------	11,000	--------	11,100	--------	11,100
Payment above basic rates	--------	1,700	--------	1,700	--------	1,700
Net personal services	341.7	2,830,000	349.4	2,918,000	344.4	2,880,000
Other expenses:						
Travel	--------	320,000	--------	340,000	--------	335,500
Transportation of things	--------	7,000	--------	7,000	--------	7,000
Communication services	--------	95,000	--------	100,000	--------	100,000
Rents and utility services	--------	34,000	--------	36,500	--------	36,500
Printing and reproduction	--------	7,500	--------	7,500	--------	7,500
Other contractual services	--------	34,500	--------	33,600	--------	33,600
Supplies and materials	--------	13,600	--------	14,000	--------	14,000
Equipment	--------	27,000	--------	49,000	--------	49,000
Retirement fund contribution	--------	179,000	--------	187,000	--------	184,500
Refunds, awards, and indemnities	--------	2,000	--------	2,000	--------	2,000
Taxes and assessments	--------	400	--------	400	--------	400
Total other objects	--------	720,000	--------	777,000	--------	770,000
Total, estimated obligations	--------	3,550,000	--------	3,695,000	--------	3,650,000

Effect of House Action

The House action reduced the appropriation amount approved by the Budget Bureau by $45,000. This represents a reduction of salary cost of 5 mediator positions at grade GS–12 ($38,000) and the related cost for Service contribution to the retirement fund ($2,500), orientation and training expense for the first 3 months of new mediator employment ($4,500). The net change in number of mediator positions will be 6 below the 1958 budget level and 5 below the 1959 budget proposal.

The House action will therefore reduce the number of employed mediators available for assignment to labor-management disputes and related activities. It will also reduce the availability of mediators for assignment as members of 2 and 3 man panels necessary in the mediation of the more important dispute situations, including the larger pace-setting industries, and those engaged in defense production.

PREPARED STATEMENT

Mr. Finnegan. Thank you very much, Senator Hill.

In the interest of saving time I would like to have our formal presentation made a part of the record.

Senator Hill. We will be glad to have you do so.

(The statement referred to follows:)

STATEMENT BY FEDERAL MEDIATION AND CONCILIATION DIRECTOR JOSEPH F. FINNEGAN

I appreciate the opportunity to meet with this committee, and to present and explain our budget requirements for the fiscal year 1959.

In view of the extreme demands on your time in considering these appropriations problems, I will make my statement as concise as possible, grouping my remarks under four headings, as follows:

1. Basic functions and responsibilities of the Federal Mediation and Conciliation Service;
2. Analysis of estimated demands on the Service for fiscal year 1959;
3. Special problems confronting the Service;
4. The relationship of these first three items to our budget requirements.

1. Basic functions and responsibilities of the Federal Mediation and Conciliation Service

The Congress has placed the primary responsbility for achieving a sound industrial peace that will benefit labor, management, and the Nation upon labor and management, under free collective bargaining, without Government control or coercion. This necessitates the settlement of all disputes between labor and management through orderly and voluntary conferences and collective bargaining. The Federal Mediation and Conciliation Service has been given the sole responsibility of representing the Government and the public in collective bargaining, to assist in preventing or minimizing disruptive labor disputes—except only in airlines and the railroads, which are under the National Mediation Board.

We discharge this heavy responsibility, primarily, by making available to management and labor the services of highly skilled and experienced mediators who participate in the collective-bargaining processes at the scene of the dispute. These mediators are charged not only with the peaceful settlement of the immediate dispute but, as well, with developing more harmonious relationship between the parties, and initiating activities to lead to fewer disputes and to lessen the future impact of labor-management controversies.

A further function is making available to labor and management representatives the means of selecting qualified arbitrators to assist in disposing of grievances and other disputes that cannot be resolved through collective bargaining and mediation.

In discharging the responsibility placed upon this Service by the Congress, there are three fundamentals that must be recognized:

(*a*) We have only a limited control over the aggregate workload of the Service. I distinguish between workload and caseload. Our caseload has increased steadily during the past 10 years. Through careful screening of such notices, cooperation with State and local agencies, and more efficient operation, we have, nevertheless, held the workload to the level that could be satisfactorily handled by our slightly smaller mediator staff. It is important to realize that we cannot control the number of disputes, the duration of disputes, nor the number of mediators that may be necessary. Obviously, even a small percentage increase in the number of cases requiring active mediation, would cause a magnified demand upon our mediator time.

(*b*) The Federal Mediation and Conciliation Service is confronted by a problem that is not common to other Government agencies—we cannot function on the basis of a backlog of cases to be serviced at our convenience. Labor-management relations are dynamic and critical as far as the time element is concerned. When a deadlock occurs or a strike is threatened, the availability of a skilled mediator, within a matter of hours, or at most a day or two, is crucial if mediation is to be effective. With a contract expiring or with bargaining having broken down and tensions and tempers rising, the parties cannot and will not sit idly by waiting for mediation assistance at some future date.

(*c*) The major portion of our total appropriation is expended on mediator salaries and travel expenses. A minimal amount is allotted to the national office in Washington, D. C., and other minimal amounts to auxiliary functions, such as training, audit, and administration. Thus, our budget very directly fixes the number of mediators available to prevent or to settle work stoppages.

2. Analysis of estimated demands on the Service for the fiscal year 1959

All of the experts and analyists in the labor-management field have predicted that the summer of 1958, running through the fall and into the spring of 1959, will produce unprecedented labor-management unrest and controversy, as compared

with recent years. While major disputes have been slow in developing thus far this year, the next 18 months promise to be very turbulent. This year, negotiations are taking place in a context without parallel in the last decade. Union members are putting pressure on their leaders to help meet the rising cost of living. Unemployment is up. Average weekly "take home pay" is down. At the same time, shrinking profits, and the cost-profit squeeze, are stiffening management's position.

Many companies (employing some 5 million workers) will pay out deferred increases or cost-of-living adjustments under long-term contracts. This puts pressure on other labor unions to get the same or better increase in current negotiations.

I am certain you are familiar with the much publicized bargaining in the auto industry which has just gotten underway. We have already spent a vast amount of time in research, study, and liaison, to be prepared to offer effective mediation should these negotiations become deadlocked.

Less publicized, but more immediately crucial, are the negotiations in the airframe and missile industry. There have been a few scattered settlements in smaller airframe plants, but the bulk of the industry, including the missile operations conducted by airframe companies, are operating under contracts that have now expired. The sole major exception is Boeing.

Currently we have a number of mediators assigned to these negotiations on both coasts and in the Central and Southern States. For the past several months, we have been spending a great deal of time preparing for the serious threat that now seems to be approaching. The threatened strike at Republic on Long Island, N. Y., involves only some 6,300; and, while this is serious, it has minor significance compared to the problem that is developing on the west coast, primarily at Douglas and Lockheed. Even if these disputes are settled without a strike, it is going to require a very heavy expenditure of staff and mediators' time; while a strike, with its ultimate effect on suppliers and subcontractors, would create a very serious national situation and also a serious mediator manpower problem, due to our small staff.

Many other major contracts are coming up for negotiation during fiscal year 1959, including Boeing Aircraft, August 1958; farm equipment, July 1958; trucking, July 1958; communications, July–September 1958; longshore, August 1958; glass, September 1958; food, February 1959; electrical, October 1958; rubber, April 1959; textile, May 1959; steel, June 1959; and nonferrous, June 1959.

Without boring you with a mass of statistics, may I just point out that the automobile and aircraft negotiations, by themselves, will directly affect over 800,000 American workers and taxpayers. A prolonged stoppage in any one of the major industries I have mentioned would result in a serious dislocation of our industrial economy with an inevitable tremendous loss of tax revenue to our Government. If this Service, through its mediation assistance, can forestall or curtail any stoppage in any of these industries, it will have justified many times over to the American taxpayer the budget I have requested.

The negotiations in these major industries will involve new concepts and problems. Our mediators must be prepared to promptly and effectively assist in these negotiations if we are to carry out the mandate given to us by Congress.

In addition to these major negotiations, there is the tandem effect of any settlement on the literally thousands of smaller firms directly or indirectly related to the major industry involved. Each of these firms has a right to expect the same quality of mediatory assistance as that accorded to the major companies. Our experience has been that the negotiations of these smaller company contracts often involve a greater expenditure of mediation manpower, both in numbers and in frequency and duration of meetings, than do the major negotiations. This is particularly true where a price increase flows out of the settlement of the major contract. The industry-related smaller firms are confronted with the problem of meeting the established settlement pattern and balancing the increased material and labor cost against consumer resistance to further product price increases.

3. Special problems confronting the Service

I have one special problem that I would like to call to your attention. It is the imperative need to provide the grade of GS–16 for my seven regional directors.

The Federal Mediation and Conciliation Service is unique in that, while its area of responsibility in labor-management matters is nationwide, the actual mediation function is strictly local. It is essentially a field service rather than a Washington operation.

As the result of careful study and substantial experience, I have delegated an exceptionally high degree of decision responsibility to my regional directors. Each regional director has complete authority and responsibility for mediator assignment and function, dispute case handling, preventive mediation and related activities, administration and planning within his respective region.

This degree of delegation and decentralization is vital to the effective mediation process, and the responsibilities certainly justify the GS–16 grade. The practical necessity for early action to permit GS–16 for regional directors is because it is extremely difficult to select and assign capable men (who must come from experienced mediators within the Service). The best mediators, from whose ranks regional directors are selected, are in GS–14. There is certainly no incentive at grade GS–15 for a man to dispose of his home, break family and community ties to move into a different area, take over a much more responsible job, with added personal costs and sacrifices, for the small difference in salary.

I have been unsuccessful in securing positions at the grade GS–16 level from the limited number of supergrade positions available to the Civil Service Commission. I am told that there is an insufficient number of grade 16 positions available for distribution to agencies from whom requests have been received. Therefore, at the suggestion of the Civil Service Commission, and with the consent of the Bureau of the Budget, I am seeking specific authority from the Congress to remedy this unworkable personnel situation by increasing the grade of the seven regional directors from grade GS–15 to GS–16. The proposed amendment is attached to this material.

This is not a money item since I have agreed to absorb the small added cost.

4. The relationship of these first three items to our budget requirement

Our budget proposed an appropriation of $3,695,000, an increase of $145,000 over the current year. This was substantially less than the amount which I had requested of the Bureau of the Budget, and was the rockbottom amount with which, by prudent administration and strict controls, I believed that the Service could do its job.

The House action reduced the appropriation as approved by the Budget Bureau by $45,000. I have applied this cut by the elimination of five mediator positions at the hiring grade of GS–12. The net change in number of mediator positions will be 6 below the 1958 budget level and 5 below the 1959 budget proposal, leaving the Service with a total working mediator strength of 204.

The major portion of the appropriation is for salaries, travel expenses, communication costs, and payments into the civil-service retirement fund. These items account for over 95 percent of the total appropriation.

Other items in the budget, which I do not believe can be reduced without crucial effect, provide for improvement in offices and conference rooms for field mediators; continued inservice training to insure that the Service has an effective and efficient mediator staff to meet the increasingly complex collective bargaining problems; internal audit of all Service operations to increase efficiency and economy; and miscellaneous auxiliary services and operations.

I assure you that my proposed staff of effective mediators using current and especially devised techniques in dealing with enlightened labor and management groups, can and will alleviate much of the tensions, pressures, and strikes which will certainly be present in the labor-management relationship during fiscal year 1959. No administrator dealing in a highly intangible service like mediation could prove, statistically, that the reduction of five mediator positions as required by the reduced appropriation in the House, would have a serious effect on the ability of the Service to discharge the responsibilities imposed on it by the Congress, but I honestly believe that it will adversely affect the efficient functions of the Service. I am convinced that the restoration of the $45,000 reduction, which has been applied to personnel, is necessary.

I will be glad to answer any questions you may have.

Proposed Amendment to Appropriation Language, Federal Mediation and Conciliation Service

SALARIES AND EXPENSES, FEDERAL MEDIATION AND CONCILIATION SERVICE

Salaries and expenses: For expenses necessary for the Service to carry out the functions vested in it by the Labor-Management Relations Act, 1947 (29 U. S. C. 171–180, 182), including expenses of the labor-management panel as provided in section 205 of said Act; expenses of boards of inquiry appointed by the President pursuant to section 206 of said Act; temporary employment of arbitrators, con-

ciliators, and mediators on labor relations at rates not in excess of $75 per diem; Government-listed telephones in private residences and private apartments for official use in cities where mediators are officially stationed but no Federal Mediation and Conciliation Service office is maintained; expenses of attendance at meetings concerned with labor and industrial relations; and services as authorized by section 15 of the Act of August 2, 1946 (5 U. S. C. 55a), [$3,550,000] *$3,695,000* (Department of Labor, and Health, Education, and Welfare Appropriation Act, 1958).

PROPOSED AMENDMENT

Seven regional director positions at grade GS–16, which shall be in addition to the number of such positions provided by section 505 of the Classification Act of 1949 (Public Law 429, 81st Cong.) as amended.

FUNCTION OF AGENCIES

Mr. FINNEGAN. With your permission I would like to comment briefly on our formal written presentation and also make some other comments.

Senator HILL. Fine. You may go right ahead.

Mr. FINNEGAN. I think you are all thoroughly familiar with the functions of our agency. I will, therefore, not dilate on the fact that we are the only agency for the conciliation of labor disputes so far as the Federal Government is concerned, other than in the railway and airline fields.

Senator HILL. You cover all the other fields?

Mr. FINNEGAN. We cover all other labor and industrial disputes which have a substantial effect on interstate commerce.

We work, of course, in cooperation with the State mediation agencies where they exist.

The nature of our work too, I think, is one that your committee is familiar with. We cannot stockpile our work. We have to do it as it presents itself.

Senator HILL. When the situation arises you have to meet that situation?

Mr. FINNEGAN. That is for sure.

Senator HILL. You are almost like a fire company. When the fire breaks out you have to go right now. If you do not, you might get there too late; is that right?

Mr. FINNEGAN. That analogy has been used very often and it is a pretty accurate one.

STAFFING PROBLEM

For that reason our staffing problem is a peculiar one and also it is one where figures do not mean a great deal.

A man may be charged with mediating only 2 or 3 cases in a year, but if 1 of the cases is a Westinghouse strike which lasts 5½ months which involves 55,000 people, that is still 1 case.

If it is a case involving 10 or 15 tool and die makers, who control the work of, say, 5,000 assembly workers, that, too, is only 1 case.

One case may last 5½ months; the other only a day, but each still comes out as 1 case. That is why the caseload figure is not a very accurate index of our activities.

Also, the nature of the work, the number of issues involved in a case has a distinct bearing upon the size of our workload. Our experience has been, in recent months, that as the economic picture has tightened and the money does not shake down from the tree as easily

as before and as the complexity of the issues increases, the toughness of the bragaining also increases even though the number of actual strikes has not shown an increase.

That situation, of course, is attributable, to some extent, to the fact that the auto industry negotiations are pending and those historically have set a pattern. A lot of negotiators drag their heels to see what comes out of the auto negotiations to make sure they do not compare unfavorably at a later date with what comes out of that picture.

BUDGET BUREAU AND HOUSE ACTION

We have requested from the Bureau of the Budget $3,825,000. The budget approved for us, after repeated appearances before the Bureau and protestations upon my part, they finally agreed to give us $3,650,000, a cut of $130,000.

In the House we were cut an additional $45,000. So we have a total cut of $175,000. That $45,000 the House cut, I have allocated to a decrease in personnel, 5 mediators. I will go into the reason why I have so allocated that cut in a moment.

That would leave us then with a basic staff of 204 working mediators.

When I assumed office in 1955 we had a basic staff of 225 mediators. I think we are doing a good job, at least the labor and management people seem to think so, with a smaller staff for reasons that I would like to talk about for a moment.

We have tried, to the extent possible, in fact have made very strenuous attempts through my Director of Administrative Management, Mr. Eady, who sits on my left, to bring all of our men into offices instead of working out of their homes.

We have set up quarters where they have conference rooms so that instead of running out to the plant, or union hall,, for a conference, they can bring the people in and the man can handle maybe 2 or 3 cases in the course of a day instead of just 1.

Also when we have our own premises we have a certain control over the parties that we do not have when we are meeting on premises that are not ours.

Senator HILL. You have a little different psychology?

Mr. FINNEGAN. Quite so.

Also, in our own office we have a better control of the bargaining agenda.

Senator THYE. That means you have mediators stationed in a town where there is considerable employment. You are speaking now of the mediator operating out of an office rather than out of his home?

Mr. FINNEGAN. That is correct.

Senator THYE. So that the office would be maintained the year around in that particular city?

Mr. FINNEGAN. That is right.

Senator THYE. He would be there so that if a question arose, why, "I will meet you at such and such an address and we will discuss it."

Will those offices be large enough to accommodate all of the negotiators or do you then have to retire to some sort of conference room for accommodating the groups that might come in?

Mr. FINNEGAN. In most cases we have tried to take on space that will be available for a conference room and also what we call breakup, or caucus, room.

Senator THYE. Does that involve quite large quarters?

Mr. FINNEGAN. Not necessarily except, say in New York City, where, as Senator Ives knows, in the waterfront negotiations we had a negotiating committee for the Longshoremen of around 200 and for the management people of around 135.

Senator IVES. In that connection, may I raise a point, Mr. Chairman?

Senator HILL. Certainly.

MEDIATION PERSONNEL

Senator IVES. I got in touch with you about a threatened strike at Republic Aviation, as I recall, yesterday. Where do those mediators come from?

Mr. FINNEGAN. They come from New York City.

Senator IVES. Do you have to pull them off something else to go out there?

Mr. FINNEGAN. No. We are staffed in such a manner that we can send them out. It may mean transferring cases from one commissioner to another.

Senator IVES. Does that cause any great delay anywhere along the line? I am not asking you about the strike itself. I am asking what this operation does to you. You have been cut now by the House five mediators.

Mr. FINNEGAN. That is true.

Senator IVES. Is that cut in force going to hurt?

Mr. FINNEGAN. It certainly is going to hurt. I cannot say we are going to be permanently crippled or badly crippled if we lose five. We can do the job, but I think it is dangerous.

I have asked for restoration of that amount.

Senator IVES. In an area of the country where the mediators were not available there would be some effect?

Mr. FINNEGAN. Where there is activity, it means in some cases the people would have to wait if our mediator complement is low. If, as a result of that delay, you have a strike there is a loss not only to the local economy, but to the Federal Government in taxes, a feature of which I am sure this subcommittee is cognizant.

Senator IVES. With this reduction of five you will be somewhat handicapped in handling new cases?

Mr. FINNEGAN. That is true.

CURRENT PICTURE IN LABOR RELATIONS

Of course, there is another thing that I would like to point out as part of the current picture. While there has been a lesser number of strikes so far this year, the negotiations have been tougher. Also the negotiations which are pending, for example, in the missile and aircraft industry, affect our defense effort, and are also a very integral part of our economy, specifically, the airframe industry. You are familiar with the activity of Lockheed, at Marietta, Ga., and Douglas at Charlotte, N. C.

I glanced at this morning's edition of the Machinist, which is headlined "Missile and Aircraft Talks Nearing Crisis Stage."

Now, no strike has occurred; talks are still going on. We have 15 people assigned to those cases at the present time. If no strike occurs, fine, but we don't consider our mediators' time wasted; the people have been occupied. Mediators have to be ready to go immediately; they cannot come in at the last moment.

We have set up special procedures through the Director of Mediation Activities, Mr. Maggiolo, to coordinate all this missile work. It has cost a lot of money but I think it is insurance well taken. We are hoping for the best but we are prepared for the worst.

SALARY ADJUSTMENT

I would like to talk to you for a moment about a special problem that is confronting our Service. Our Service is divided, as you know, into seven regions. It might be helpful for the committee to glance at the regional setup.

You will note that region 7 comprises a little bit better than a third of the whole United States, the 11 Western States. That is run by a regional director out of San Francisco. He also has jurisdiction over Hawaii where a sugarcane strike has been in progress for the last 8 weeks.

He has also jurisdiction over the fishing industries and all similar labor disputes that originate in Alaska.

Only last week we settled out of the regional office in Atlanta, Ga., headed by Mr. Pierce, a dispute in Puerto Rico.

Those regional directors are grade 15. The difference between a grade 15 and a man who is at top of grade 14, and 70 of our mediators are grade 14, is so slight that I find a very great reluctance on the part of a good mediator to accept a job as regional director because he has no financial incentive to pull up his roots, move to a new location and take on the burden and responsibilities, and I might add, the added personal cost of the regional director's job.

Senator HILL. What is the difference in pay between grade 15 and 14?

Mr. EADY. Top of the grade 14 is $11,395, and the bottom of grade $11,610. It is a little more than $200.

(NOTE.—The salary for grade GS–14 ranges from $10,320 to $11,395; for grade GS–15, from $11,610 to $12,690.)

Mr. FINNEGAN. The regional director having to travel that area of 11 Western States is reaching into his own pocket, as we all know, every time he moves away from first base.

Senator HILL. You mean he has his travel allowance, but the allowance really does not meet the full cost to him.

Mr. FINNEGAN. That is true. I am seeking relief from this committee to make these regional directors grade 16's.

I went to the Bureau of the Budget with this problem and they agreed to my making such an application to the Congress. We would absorb the expense ourselves. It would cost about $4,500.

Senator THYE. The grade 16 would be a salary raise. I understood you to be referring to 14 and 15.

Mr. EADY. The difference between 14 and 15 is the figure I gave you. The salary range for grade 16 begins at $12,900 and goes through $13,760.

Senator THYE. In other words, the White House has approved this in your discussion with the White House and you are faced with this, that you cannot get the type of man and retain him at the salary of a grade 15.

Mr. FINNEGAN. That is correct, Senator Thye.

I went to Civil Service Commission with my problem. They said, "We simply don't have the supergrades to allot, but if you can get authorization and appropriation from the Congress that is all right with us."

Senator THYE. Could you pay the salary, even though the grade was not there to allot to your Division? You have to have an increase in the classification of this regional director, do you not?

Mr. EADY. Yes, sir.

Senator THYE. Because if you did not get the grade 16 authorization, even though you had the money, you would be unlawful in paying the sum?

Mr. FINNEGAN. That is correct, sir.

CIVIL SERVICE JURISDICTION

Senator HILL. Now, Mr. Finnegan, in that connection we have sought on one or two occasions to take action such as you now request. That actually has met with opposition on the part of the Civil Service and Post Office Committee because they felt that it was legislation, which it really is, and that we were intruding upon their jurisdiction. I am just bringing that to your attention because that has been our experience in the past. They did not like this idea of the Appropriations Committee writing legislation in an appropriation bill, legislation over which they have the jurisdiction involving matters that they think should be brought to them.

Have you brought this matter up with the Legislative Committee?

Mr. FINNEGAN. I made this same presentation to the House subcommittee, headed by Mr. Fogarty.

Senator HILL. That was an appropriation there, you see.

Mr. FINNEGAN. Mr. Fogarty made the same point you do, expressed the viewpoint he did not feel they could legislate on this, but he did express the opinion that he thought we were entitled to it.

FUNCTION OF REGIONAL DIRECTOR

Senator THYE. Let me try to find out just what are the exact functions of these men. I think that would help us from the standpoint of understanding.

Mr. FINNEGAN. These men, Senator Thye—you are speaking of the functions of the regional directors?

Senator THYE. Yes, sir.

Mr. FINNEGAN. The mediators are scattered in some 80 or 90 locations throughout the country. They, in turn, report to the regional directors. The regional director is my representative in the field.

He, in turn, reports to me. He is my arm in the field. He has to get away from his regional office, out into the field, and actively participate in the big cases. I feel we can get along with smaller numbers if we have closer supervision of the personnel.

For that reason, I am not disturbed about applying my budget cut. I apply it to personnel, because I think I can get more work out of people if their supervisor keeps after them.

I don't think in any Government agency, at least none that I can think of, is responsibility delegated to the regional director to the extent that it is in this service. Ours is a field operation. We only have three people at the national office who do mediation work, Mr. Maggiold, who coordinates all mediation activity, and my Deputy Director, Bob Moore, a former regional director, both of these men get into big cases on occasion, and myself. But the regional director himself must back up the play of the mediator and give him assistance and supervise his activities. He has almost sole responsibility for running his region, and I hold him responsible for seeing that it is run right.

It does seem to me if I could get some relief on the grade question, that I would then have a personnel structure which would make some sense.

There would be some incentive for a man who is a 14 to become a regional director. There would be some incentive for a man who is a mediator to become an assistant regional director and do the paper shuffling at the regional office and thus relieve the regional director so that he can actually go out and work in the field. That is something I would appreciate very much the committee giving some thought to.

LEGISLATION ON APPROPRIATION BILLS

Senator HILL. Mr. Finnegan, let me say this, that speaking as one member of this committee I am very sympathetic about all you have had to say about your need for these increased grades.

But it does involve this question of legislation in an appropriation bill, which, under the rules of the Senate, is not permitted, and which is strenuously objected to by the Senate Committee on Civil Service and Post Office.

As you know, the Senate not very long ago, just several weeks ago, passed what we know as the Classified Pay Act. In that act, some of these higher grades, or a number of these higher grades, were authorized. Whether that would take care of you or not, I don't know, because I haven't examined the act with that thought in mind. I notice your Deputy Director shaking his head that you would not. Let me make this suggestion to you.

That bill is now in the House Legislative Committee, of which Congressman Murray, of Tennessee, is chairman.

I would certainly strongly suggest that you go over and talk to him about this matter, and see if you couldn't be included in that bill.

I would say to you frankly, even if this committee should see fit to grant your request, I am afraid that we would be faced with a point of order when we got to the floor of the Senate, and there would be no question but what the point of order would be good and the legislation embodying your request would go out, you see.

So I would strongly suggest to you that you take this matter up with Congressman Murray and his committee, with the thought in mind of having them give you these increased grades, which you need, in the Classified Pay Act. I can assure you that if they will put these grades in for you in the act in the House, if I have any influence with the Senate conferees, that influence will be exercised in your behalf.

Mr. FINNEGAN. Thank you very much for your suggestion, Senator Hill, and your indication of cooperation.

Senator POTTER. I think, Mr. Chairman, we have had this problem in the past with other agencies, as the Senator well knows. Even if we put it in and a point of order is not raised, you always have a problem in conference.

Senator HILL. With the House conferees.

Senator POTTER. The House conferees are very reluctant to accept it.

Senator HILL. Under the rules of the House, the House conferees cannot agree to an amendment involving legislation in appropriations. The only thing they can do is take it back to the House for a separate vote. They do not look with favor upon writing legislation into appropriations.

Senator POTTER. One of the points which has been brought out, and which, I think, should be viewed more realistically, and which again is something for a legislative committee, is your travel fund. I think it is perfectly ridiculous to assume that officials can travel with a limit of $12 a day. As you say, to have people in Government go out, they have to reach into their own pocket to do Government business.

Mr. FINNEGAN. Everyone can say "Amen" to that.

The reason I made the request is because, when they allocate these grades, we are a very small agency, and we wind up being a voice crying in the wilderness. I think an expression of the committee and yourself, of approval, might carry some weight with the Civil Service Commission when it comes to allocation of those grades.

Senator HILL. In that connection, we would certainly consider most carefully putting something in our report that might be helpful when this matter is before the Civil Service Commission.

Mr. FINNEGAN. I think that would make a substantial contribution to the betterment of the labor-management picture and the morale of the Service, Senator.

Senator THYE. That would be about the only way we could do it without finding ourselves confronted with a point of order, to put it into the report that we think it should be done, while we recognize we cannot so specify it in the appropriations bill.

Mr. FINNEGAN. No one can ask the committee to do the impossible. I think that would be most helpful, the language you suggest.

Senator THYE. Is the salary the same in these geographical areas?

UNIFORMITY OF SALARY GRADES

For instance, I look at New England. That is rather a small land area. I look at the six States comprised of the Dakotas, Minnesota, Wisconsin, Illinois, Indiana, as another area, which is considerably smaller than even the central group of States, and most certainly the western region that is embodied in the San Francisco regional office.

Mr. FINNEGAN. Industrial density is really the test. The grades are the same. For example, in Senator Potter's area, region 4, which includes Ohio, that is our busiest region. It is one of our smallest regions but has one of the biggest workloads in the whole United States.

Senator THYE. Yes. I notice also that Pennsylvania and West Virginia is relatively small geographically in comparison with region 4.

Mr. FINNEGAN. That is right, United States Steel, Aluminum Company of America, Kopper's Coke. In some of the areas in the West, you cannot think in terms of just geography.

It might take, for example, a man from San Francisco to go to Utah to service a case, or he might have to go to Idaho. Your travel expenses can be very heavy out there. A man handling 1 case may take 2 or 3 weeks, whereas in Cleveland or Toledo, 1 man may be handling half-dozen cases during the same time.

Senator THYE. Thank you.

Senator HILL. Are there any other questions?

If not, we want to thank you for your staff and statement very much.

The next item is the United States Soldiers' Home.

UNITED STATES SOLDIERS' HOME

STATEMENT OF GEN. WADE H. HAISLIP, GOVERNOR; COL. PAUL R. GOODE, DEPUTY GOVERNOR; BRIG. GEN. H. D. OFFUTT, CHIEF SURGEON; RAMOND A. GRITTON, BUDGET ANALYST; G. H. ISBELL, ADMINISTRATIVE OFFICER; MAJ. GEN. DAVID W. TRAUB, DIRECTOR OF ARMY BUDGET; AND STUART H. D FREED, BUDGET ANALYST

APPROPRIATION ESTIMATE

LIMITATION ON OPERATION AND MAINTENANCE AND CAPITAL OUTLAY

For maintenance and operation of the United States Soldiers' Home, to be paid from the Soldiers' Home permanent fund, [$4,750,000] *$5,178,000*, of which [$34,000] *$434,630* shall remain available until [June 30, 1959] *expended* for construction of buildings and facilities, including [demolition] *plans and specifications*: *Provided*, That this appropriation shall not be available for the payment of hospitalization of members of the Home in United States Army hospitals at rates in excess of those prescribed by the Secretary of the Army, upon the recommendation of the Board of Commissioners of the Home and the Surgeon General of the Army.

Program and financing

	1957 actual	1958 estimate	1959 estimate
Program by activities:			
1. Medical care	$1,912,689	$2,021,117	$2,098,887
2. Domiciliary activities	1,023,350	1,135,726	1,163,576
3. Administration and central services	1,506,961	1,559,157	1,480,907
4. Permanent improvements	488,129	2,210,842	575,086
Total obligations	4,931,129	6,926,842	5,318,456
Financing:			
Unobligated balance brought forward	605,427	2,317,298	140,456
Receipts from Soldiers' Home permanent fund	6,643,000	4,750,000	5,178,000
Unobligated balance carried forward	−2,317,298	−140,456	
Total financing	4,931,129	6,926,842	5,318,456

Object Classification

	1957 actual	1958 estimate	1959 estimate
U. S. SOLDIERS' HOME			
Total number of permanent positions	999	1,001	997
Full-time equivalent of all other positions	18	11	11
Average number of all employees	979	976	976
Number of employees at end of year	1,032	1,032	1,032
Average GS salaries and grades	3.4 $3,450	3.5 $3,669	3.5 $3,684
Average salary of ungraded positions	$2,763	$2,871	$2,877
01 Personal services:			
Permanent positions	$2,919,863	$3,036,221	$3,049,801
Positions other than permanent	54,720	52,629	52,629
Other personal services	80,332	82,150	82,150
Total personal services	3,054,915	3,171,000	3,184,580
02 Travel	862	565	565
03 Transportation of things	929	500	500
04 Communication services	13,678	13,610	13,610
05 Rents and utility services	84,002	84,360	84,360
06 Printing and reproduction	3,040	3,650	3,650
07 Other contractual services	546,449	438,315	370,470
08 Supplies and materials	900,178	918,054	966,895
09 Equipment	58,758	76,131	122,070
10 Lands and structures	37,158	73,480	43,110
11 Grants, subsidies, and contributions	2,775	169,911	188,330
15 Taxes and assessments	1,088	800	800
Subtotal	4,703,832	4,950,376	4,978,940
Deduct quarters, subsistence, and laundry charges	163,789	159,234	143,940
Total, United States Soldiers' Home	4,540,043	4,791,142	4,835,000
ALLOCATION TO CORPS OF ENGINEERS, DEPARTMENT OF THE ARMY			
Total number of permanent positions	4	13	13
Average number of all employees	4	11	13
Number of employees at end of year	6	11	13
Average GS grade and salary	8.0 $5,904	6.3 $5,072	6.6 $5,286
01 Personal services:			
Permanent positions	$23,818	$56,533	$66,947
Other personal services	1,063	217	243
Total personal services	24,881	56,750	67,190
07 Other contractual services	74,522	14,450	4,680
08 Supplies and materials	134	----------	----------
10 Lands and structures	291,549	2,061,000	407,686
11 Grants, subsidies, and contributions	----------	3,500	3,900
Total, Corps of Engineers	391,086	2,135,700	483,456
Total obligations	4,931,129	6,926,842	5,318,456

SOLDIERS' HOME PERMANENT FUND

Amounts available for transfer

	1957 actual	1958 estimate	1959 estimate
Balance brought forward	$70,990,159	$77,542,988	$84,404,868
Receipts:			
Stoppages, fines, and forfeitures	8,448,188	7,500,000	6,500,000
Estates of deceased soldiers and airmen	292,656	200,000	200,000
Withheld pay	1,631,649	1,559,880	1,559,800
Interest credited	2,161,386	2,300,000	2,600,000
All other	665,611	50,000	50,000
Unobligated balance returned	4,443	10,000	----------
Total available	84,194,092	89,162,868	95,314,668
Transfer to—			
"Limitation on operation and maintenance and capital outlay"	−6,643,000	−4,750,000	−5,178,000
"Payment of certified claims"	−8,104	−8,000	−8,000
Balance carried forward	77,542,988	84,404,868	90,128,668

This fund consists of receipts from fines, forfeitures, and stoppages of pay of Regular enlisted personnel of the Army and Air Force, withholding of 10 cents per month from the pay of such personnel, estates of deceased soldiers and airmen, other receipts consisting largely of sales and interest of 3 percent on fund balance. The receipts and the balance are available for obligation and expenditure through the maintenance and operation account only as authorized annually by Congress (24 U. S. C. 44, 45; 31 U. S. C. 725s).

PREPARED STATEMENT

Senator HILL. General, you are an old friend of this committee and a distinguished retired officer of the United States Army.

Senator THYE. Mr. Chairman, let's reverse that. We are a friend of his.

General HAISLIP. That is what I would rather hope, Senator.

Senator HILL. I thought he would say that.

Well, we welcome you here. We are glad to have you, and I would like to have you proceed in your own way.

General HAISLIP. Mr. Chairman, I have a prepared statement that I would like to submit for the record.

Senator HILL. Very well.

(The document referred to follows:)

STATEMENT OF GEN. WADE H. HAISLIP, GOVERNOR, UNITED STATES SOLDIERS' HOME

I have been Governor of the United States Soldiers' Home for 6½ years and during that time I have taken great pride in representing the home before this committee and presenting the requirements for the operation of the home. As a preamble to my statement, I would like to remind the committee that the appropriations made annually by the Congress are financed from the Soldiers' Home permanent fund (trust fund) which was established by law in 1851. While the home budget appears in the President's budget, it is not included in the total since the home receives no support from the general funds of the Treasury.

PURPOSE OF ESTABLISHMENT

The United States Soldiers' Home was established in 1851 to provide a home for the relief and support of certain old, invalid, or disabled soldiers of the Regular Army. Applicability of the laws governing the home was extended to include airmen in 1947. The establishment is devoted solely to the interests of the professional soldiers and airmen and recognizes and rewards their service both in peace and in war. The home is open to career soldiers and airmen only and benefits provided by other agencies do not overlap, as has been claimed. It is not the mission of the home to rehabilitate members for return to civilian life.

MEMBERSHIP CRITERIA

Membership is confined to former warrant officers and enlisted men who have had some service in the Regular Army or Air Force. In addition, membership is further limited to:

1. Those who have served honestly and faithfully 20 years or more, and
2. Those with a service-connected disability which renders them incapable of earning their own livelihood.

FINANCING

The act of 1851 established the home and provided that it would be financed from a trust fund, and not from the general funds of the Treasury. The Congress appropriates from this fund annually for the support of the home. This fund is built up from the following principal sources:

1. A monthly contribution of 10 cents made by each enlisted member of the Regular Army and Air Force,
2. Fines and forfeitures imposed upon soldiers and airmen of the Regular Forces by sentence of courts martial, and

3. Interest of 3 percent per annum on the fund balance in the United States Treasury.

The permanent fund balance was $79,548,577 on March 27, 1958. It is gratifying to know that for many years to come, as in the past, the home will be able to sustain itself and expand as necessary on annual appropriations by the Congress from this fund without becoming a burden on the taxpayer.

ADMINISTRATION

As Governor of the home, I report to a Board of Commissioners, established by the basic law, consisting of myself as the President of the Board, and six of the principal staff officers of the Army: The Surgeon General, the Chief of Engineers, the Chief of Finance, the Quartermaster General, the Judge Advocate General and the Adjutant General. The basic legislation empowers this Board to establish regulations for the general and internal direction of the institution. These regulations must be submitted to the Secretary of the Army for approval.

ANNUAL REPORT

The United States Soldiers' Home, in accordance with law, makes a report of its activities annually to the Congress. Included in this document, which is transmitted to the Congress, is a report by the Inspector General of the Army, who is required by law to make an annual inspection of the home and report the results to the Congress. It is pertinent to quote an extract from his most recent report dated November 7, 1957:

* * * * * * *

SUMMARY OF OBSERVATIONS

4. The records, accounts, management, and sanitary condition of the home were considered to be excellent. It was evident that considerable progress has been made in all areas since the last inspection, particularly in the area of building maintenance and renovation.

5. The appearance of the home grounds and the interior of the domiciliary buildings, hospital, general mess, and canteen was excellent.

6. Morale and discipline of the members of the home were excellent. Matters requiring disciplinary measures were of a minor nature and the punishment meted out was considerate in view of the age and infirmities of the members.

7. The recreational program accommodated the desires of the members and appeared to be operating in a highly efficient manner.

8. The hospital was performing its mission in a superior manner. The attitude of its officers and civilian employees left nothing to be desired. An active modernization program was in progress to provide the patients with every comfort and convenience.

* * * * * * *

MEMBERSHIP

On January 14, 1958, the membership of the home exceeded 2,000 for the first time in its history. The fiscal year 1959 estimates are based on an average of 2,028 members, an increase of 45 over the fiscal year 1958 estimated average of 1,983. I will discuss later the increases contained in the budget as a direct result of the estimated increase in membership. The Army and Air Force have shown a stimulated interest in the home recently, and in May 1957 a net increase in membership began and has since developed into a persistent trend upward. The net gain in membership during fiscal year 1957 was 63. The net gain during the first 6½ months of the current fiscal year is 130. If the present trend continues the number of applicants admitted this fiscal year will be approximately 100 percent greater than fiscal year 1957, and there will be a decrease in the number of members taking discharges.

Based on statements made recently by members of the home, jobs for older men are not as plentiful now, so they appear not only to be taking advantage of their eligibility to enter the home but also to remain once admittance has been gained.

BED CAPACITY

Prior to the completion of the construction program consisting of a new 829-bed domiciliary building and a new 210-bed hospital ward wing, the capacity of the home was 1,177 domiciliary beds and 371 hospital beds. While the new build-

ings added to the capacity, certain submarginal and overcrowded areas were vacated. After the new construction was available and the renovation of older buildings completed, the total bed capacity became 1,466 domiciliary beds and 421 hospital beds. At the present time, with 2,002 members on the rolls, not all of whom live on the reservation, there are 12 domiciliary beds vacant. Notification to eligible applicants was discontinued on March 11, 1958.

I was informed by the Bureau of the Budget, that if a trend of increasing membership became definitely established, and it was necessary to provide additional capacity, funds could be requested to rehabilitate the Sheridan Building, which is one of the older buildings, vacated and placed on a standby status when new construction was completed in 1954. A request was submitted to the Bureau of the Budget for funds to reopen this building. Subsequent to this action, the House committee approved $58,500 to reactivate this 168-bed building on a temporary basis until such time as further new construction can provide more beds. The number of hospital beds is adequate to provide care for members of the domiciliary area requiring hospitalization for some time to come. The critical area lies in the rapidly diminishing number of domiciliary beds available.

JUSTIFICATION OF FISCAL YEAR 1959 ESTIMATE

The request for fiscal year 1959 of $5,178,000 is $428,000 greater than the $4,750,000 appropriated for fiscal year 1958. In order to avoid encumbering the committee with unnecessary details, I will give a brief description of the general changes in the fiscal year 1959 budget estimates over the appropriation for fiscal year 1958. The totals which follow do not appear as such in the budget estimates as they represent total changes in a number of projects.

1. There is a net increase of $57,556 to provide for an estimated increase in membership. This total will provide for additional items of supplies, equipment, and rations, and the reclassification of 3 existing man-years of hospital employment to provide additional supervisory and professional services resulting from an increased patientload.

2. Now that the renovation of existing facilities is almost complete, there is $100,046 less requested for such items as major repairs, improvements, and replacement of equipment.

3. The two mandatory increases, amounting to $20,981, are for an increase in the daily rate at St. Elizabeths Hospital and for the home's payment into the civil-service retirement fund for a full fiscal year 1959. Payments did not begin until the third payday of fiscal year 1958 in accordance with Civil Service Commission instructions.

4. Each year, the budget request contains certain items, the estimates for which are based purely on actual experience and are not the result of program changes or increased population at the home. Such items this year result in a net increase of $30,272 and cover a reduction in the unit cost of fuel oil, based on current prices, additional medical supplies to make up for the inadequate appropriation for fiscal year 1958 for this purpose, a reduction in the number of employee rations due to the persistent trend of civilians to live out and bring lunch, and a consequent increase in cash required to offset the decreased deductions made for meals and quarters.

5. Additional funds in the amount of $19,695 are requested for certain equipment replacement which is done infrequently, and for additional items of equipment for offices such as planning files and a desk specifically designed for inventory maintenance.

6. The request for permanent improvement items is $400,630 greater than the current year appropriation, primarily due to a request for funds to meet increases in the cost of construction of the new service area which became evident after completion of final plans and specifications. Also to be provided is a parking lot for members' cars, construction of a road from Eagle Gate to the Sheridan Building and purchase of steel shelving and bins for the warehouse in the new service area.

7. A net decrease of $1,088 has resulted from reducing the unit cost of member and employee rations and increasing the unit cost of patient and special diet rations.

LAND

For a number of years, this committee has shown an interest in the transfer of certain portions of Soldiers' Home land to the General Services Administration in 1950. I have always appreciated this concern and was very happy to report to this committee last year, that agreement between the Home and the General Services Administration had been reached regarding payment for this property. The amount accepted by the home was $13,500 per acre. To date, payment has been received for 2 of the 3 parcels of land. I would like to read for the record, a letter I received from the General Services Administration regarding payment for the third portion of land, approximately 30 acres:

DECEMBER 3, 1957.

Gen. WADE H. HAISLIP,
United States Army, Retired,
Governor, United States Soldiers' Home, Washington, D. C.

DEAR GENERAL HAISLIP: This has reference to Colonel Freeman's telephone conversation on November 21, inquiring when payment for the excess property at Soldiers' Home would be made.

It is our present intention to present a plan for the use of this property and to request funds to be used in the reimbursement of the Soldiers' Home permanent fund for the purchase of the property. There are no funds available for the immediate payment of the voucher submitted June 24, 1957.

Since funds are not available for reimbursement at this time, we should like to hold the voucher in suspense until we have the opportunity to present to Congress plans for the use of the property and effect reimbursement to the home.

Sincerely yours,

FRED S. POORMAN,
Deputy Commissioner, Public Buildings Service.

* * * * * * *

That is the situation up to this time and there is nothing further I will add.

CONCLUSION

I appreciate the opportunity of appearing before this committee, and I would like to express the deep appreciation of the members of the home for the interest in the home shown by the Congress and for the farsighted measures taken through the years by the Congress for the care of the disabled soldiers and airmen. I can assure this committee that continued effort is being made by the officials of the home to carry out the mission of the home efficiently and economically.

BUDGET AND HOUSE ACTION

General HAISLIP. I have a statement as to the increases and decreases in our budget estimates in their voyage through the Bureau of the Budget and the House. I will deal only with increases and decreases over last year's appropriation, if that meets with the committee's approval.

Senator HILL. Very well.

(The document referred to follows:)

Summary of changes

	Positions	Amount
1958 actual appropriation	976	$4,750,000
1959 appropriation request	976	5,178,000
Net change requested		+428,000

Summarp of changes—Continued

	1959 request to Bureau of Budget	1959 budget estimate	1959 House allowance
Increases:			
Items related to the construction of a new service area	$580, 954	$390, 809	$390, 809
Reactivation of Sheridan Building and resulting increase in membership	149, 706	48, 561	107, 061
Unit cost of member ration	4, 043	−15, 435	4, 065
Hospital supplies	49, 000	40, 000	40, 000
Payment into the civil-service retirement fund	18, 821	18, 821	18, 821
Deductions for quarters, subsistence and laundry	16, 461	15, 294	15, 294
Fuel oil	10, 000	−8, 000	−8, 000
Renovation of heating and electrical systems in quarters No. 1 and 3	35, 000		
Construction of road	22, 350	22, 350	22, 350
Construction of parking lot for members' cars	20, 760	20, 760	20, 760
Unit cost of patient ration	6, 661	6, 661	6, 661
Unit cost of special diet	2, 409	8, 158	8, 158
Preliminary plans for conversion of Grant Building to administration space	3, 000	3, 000	3, 000
Premiums on bonds, delivery of payrolls, supplies for grounds, FICA contributions and St. Elizabeths Hospital	4, 594	7, 181	7, 181
Reductions:			
Maintenance program	−108, 098	−114, 698	−114, 698
Reduction in number and unit cost of employee rations	−3, 730	−10, 181	−10, 181
Equipment replacement	−3, 526	−4, 876	−4, 876
Payment to fewer nonpensioners	−405	−405	−405
Net increase	808, 000	428, 000	506, 000

STATEMENT RELATING TO ACTION BY BUREAU OF THE BUDGET ON THE UNITED STATES SOLDIERS' HOME FISCAL YEAR 1959 BUDGET

1959 request to Bureau of Budget	$5, 558, 000
1959 budget estimates to Congress	5, 178, 000
Reductions by Bureau of Budget	380, 000
Deferral of certain items in connection with the new service area	$190, 145
Increased costs of construction between August 1957, and August 1958	127, 000
Moving stock and equipment to new service area	24, 000
Landscaping new service area	20, 000
Relocating primary electric feeder. This amount was included in the $340,000 the Bureau of the Budget did allow for increased costs	16, 740
Additional electric current for both service areas during transition	2, 000
Moving phones to new service area	405

The 1959 budget submitted to the Bureau of the Budget was based on the fact that the construction funds for the new service area, appropriated in fiscal year 1957, would be released in July or August 1957. Due to delay in beginning construction, it will be impossible to obligate funds for the items above during fiscal year 1959.

Elimination of certain items in connection with deferral of funds for reactivation of the Sheridan Building	$101, 145
Cost of reactivating the Sheridan Building	58, 500
90 less member rations than requested (from 1,170 to 1,080)	30, 551
15 less patient rations than requested (from 395 to 380)	5, 530
Reduction of 6 patients per day at Walter Reed Army Hospital	6, 564

By the time the Bureau of the Budget deferred the funds for reactivation of the Sheridan Building, it had become obvious that the home would need this building and a request was made for restoration of $58,500. Subsequent to this action by the home, the House committee reinstated to the 1959 budget request $58,500 to reopen this building. It should be noted that at the time the Bureau of the

Budget deferred this item, it consequently reduced the estimated number of member and patient rations ($36,081 for 90-member and 15-patient rations). The revised estimate by the home is $43,500 for 101-member and 25-patient rations. The increase over the number cut by the Bureau of the Budget is based on an additional 5 months experience on which to base an estimate.

The Bureau's cut of six patients per day at Walter Reed Army Hospital is not challenged by the home in view of the number of beneficiaries now being carried at that hospital.

Elimination of funds for renovation of quarters No. 1 and 3 ..... $35,000

The Governor has accepted this cut in view of the fact that the job would require the Governor and Secretary-Treasurer to vacate their quarters. This item will be requested in a later budget.

Reduction of unit cost of member ration from 93 to 88 cents $19,478

Inasmuch as this reduction represented a ration at less cost than paid during the fiscal year 1957, the Governor asked reinstatement to 93 cents. This was denied by the Bureau of the Budget which allowed 88 cents. The House committee has allowed an additional $19,500 to provide a 93-cent ration.

Reduction in unit cost of fuel oil from 8 to 7½ cents per gallon $18,000

In view of the current cost of fuel oil (7 to 7½ cents per gallon) the Governor did not request restoration of this cut.

Reduction in request for hospital supplies $9,000

In view of the fact that the Bureau of the Budget did allow an increase over the fiscal year 1958 appropriation of $40,000, the Governor did not request restoration of this cut.

Miscellaneous	$15,568
Resurfacing road, east of lakes	6,600
Fewer employee rations	6,451
1 passenger car	1,350
Increased number of deductions for quarters, subsistence, and laundry	1,167

The Governor did not request restoration of the funds for resurfacing the road and for one passenger car on the grounds that neither was urgent. Between the time the budget estimates were submitted to the Bureau of the Budget and the time of reduction, there had been a decrease in the number of employees eating and therefore the Governor did not request restoration of the cut. The cut sustained from the Bureau's action of increasing deductions from employees was not requested to be restored.

It should be noted that the reductions above amount to $388,336. However, the Bureau of the Budget made certain minor additions amounting to $8,336. The net reduction therefore was $380,000.

Statement of Effect of House Action on Fiscal Year 1959 Appropriation for the United States Soldiers' Home

The House allowance provided an additional $58,500 to reopen the Sheridan Building to meet the increased demands being made on the facility. The reopening of this building will provide additional beds during fiscal year 1959. Rations must be provided for the estimated increase in members and patients. The Bureau of the Budget, upon deferring the Sheridan Building reduced the home's request by 90-member and 15-patient rations at a total cost of $36,081. The revised estimate by the home is 101-member and 25-patient rations at a total cost of $43,500. The increase over the number cut by the Bureau of the Budget is based on an additional 5 months' experience on which to base an estimate. It should be noted that the $43,500 figure is computed on a 93-cent ration for the domiciliary member as allowed by the House committee.

The House allowance also provided an additional $19,500 for rations which will permit the home to continue feeding the 93-cent ration now being served members in the domiciliary area.

REQUEST FOR CONSTRUCTION FUND

General HAISLIP. There are a number of items with respect to the construction of our new service area. On that we asked for $580,954. The Bureau of the Budget allowed $390,809, and the House allowed the same amount.

I do not request any change in that because we had certain items in our estimates, for instance, moving our stock, equipment, and phones to the new area, landscaping the new area, and electric current and so forth, which, due to the delay in getting started, we wouldn't be able to obligate anyhow. We have 1 mount in there of $127,000, which represents what the engineers thought would be the increase in construction costs from last August up to this time.

However, we find that beginning in November, the building index stood still, until January, and from January to date it has increased only two-tenths of 1 percent. So we feel that we will not need that extra $127,000

Another item was the relocation of a primary electric feeder, which was included in the $340,000 of another increase and, which was droppped out by mutual consent The only other large item is in connection with the increased membership of the home Since May of 1957, we have had a steady and continuous increase in the membership of the home to the point where the home is practically filled now.

HOME MEMBERSHIP

Senator HILL. What is your membership today, General?

General HAISLIP. Our membership, as of the end of March 1958 was 1,996. It went over 2,000 about a month before. While we gained 63 members in the fiscal year 1957, we have already gained 130 members thus far in fiscal year 1958.

We asked for $58,500 to reactivate the Sheridan Building, which has been standing in reserve just to handle a problem like this, when we became crowded. We will fix it up with a minimum of maintenance, and use it to house the members who want to come in until we can get a new building and reestablish our present standard of living.

The Bureau of the Budget deferred that without prejudice, but conditions which have occurred since that time shows absolutely the need of that building and the House gave it back to us.

Senator THYE. How many are there in the home now?

General HAISLIP. 1,996 on the 31st of March.

There were as many as 2,008 in March. But the largest the home has ever been, was in February 1958, when it reached 2,013.

Senator THYE. That is your World War I men, is it not?

General HAISLIP. Well, it is mostly retired soldiers of over 20 years' service. About half of the home is composed of those, and the other half is composed of men who became disabled in line of duty, incident to the service, and who have been retired by the military—by the Army or the Air Force—and if those have a disability determined by our board as such that they are unable to earn a livelihood, they come in, too.

So the home membership today is split about half each. It is impossible to tell the exact figure, but there are between 60,000 and 70,000 men in the United States today who are entitled to member-

ship in the home. We have had, as I say, since May of 1957, a persistent increase. I thought for a long while that it might have been just one of those things, that it would drop down again to our normal.

Senator THYE. If he is physically unable to earn a living, what is the situation? What is the status of that individual? What does he have to pay?

General HAISLIP. He doesn't have to pay anything.

Senator THYE. Who determines that? Do you determine that he hasn't the ability to earn his living?

General HAISLIP. A medical board, consisting of the Chief Surgeon, his doctors, and myself, determines that he is disabled to a point where he can't earn a livelihood. We use for that, Senator, the standards that the Veterans' Administration has adopted through the years, and that they apply, themselves, to the people that apply there.

Senator HILL. General, your funds come from a trust fund, don't they?

General HAISLIP. Yes, sir. They are in the President's budget, but they are not totaled in that budget. We receive no support from the general funds of the Treasury.

Senator HILL. None of your funds come out of the Treasury?

General HAISLIP. No, sir.

Senator HILL. They come out of your special fund.

General HAISLIP. A special fund which by law is deposited in the Treasury.

Senator HILL. Yes, but it is not out of the general fund at all.

General HAISLIP. That is correct.

SOURCE OF TRUST FUND

Senator HILL. For the sake of the record, you might just state how your fund acquires its money.

General HAISLIP. In the basic act founding the home, passed in 1851, they prescribed that the home would be run without cost to the taxpayers, that each soldier would make a certain contribution for the support of the home, and that fines and forfeitures of deserters, soldiers tried by courts-martial, and so forth, would go into this fund. Then in 1883 the Congress amended the act and stated that our fund would be deposited in the Treasury, and that we would be paid 3 percent interest on the balance in the Treasury. Then in the Permanent Appropriations Repeal Act of 1934, it prescribed that we would go through the same procedure as any other Government establishment in getting our money. We submit a budget just like anybody else, and go through the same route, but the appropriations, instead of being made from the general funds of the Treasury, are made from our trust fund.

Senator HILL. From your special trust fund, which is not any burden upon the taxpayers.

General HAISLIP. No, sir; it is not.

PERSONNEL PROCUREMENT

Senator POTTER. Let me ask you this question: Do you have any problem today of getting personnel for the home?

General HAISLIP. Do you mean our employees?

Senator POTTER. Yes.

General HAISLIP. No, sir. Well, Senator, we have this trouble, and everybody has; we do fish around to try to make certain we are getting a person who is going to stay with us, and who is the right type of person. But we don't have any vacancies that we find difficult to fill.

Senator POTTER. Do they have to be ambulatory?

General HAISLIP. I was talking about employees.

PATIENTS IN HOSPITALS

Senator POTTER. I was talking about employees. But now I am talking about the patients. Do you have bed patients?

General HAISLIP. Yes, sir. We have almost 400 men in the hospital now. We take them no matter what their condition, Senator. We have 47 out at St. Elizabeths Hospital that are insane, and we pay the rate that the Government prescribes for them. We have many men in our hospital who will never leave the hospital; blind, amputees, paralytics, senile, every type of old person who is unable to care for himself is cared for there. We take great pride in the care we give them. But we take anybody who is qualified otherwise to come into the home regardless of his condition.

Senator POTTER. You must have quite a nursing staff.

General HAISLIP. Yes, sir.

We have one of the finest hospitals. We are fully accredited by the American Hospital Association. We have a group of devoted doctors and nurses. We have a long-time contract with the Sisters of Charity, Order of St. Vincent de Paul, and they do the nursing, and then our own employees are helpers in the wards, and so forth. They have done a wonderful job by us. They are not interested in the 40-hour week. They work continuously and devotedly with the patients. I am always inspired, if I can use that word, every time I go to the hospital, with the interest that everybody takes in the patients, and the appreciation and gratitude that the patients show for it. It is a fine place. I would like to show it to you some time.

Senator POTTER. I would like to visit some time.

Senator HILL. General, are you satisfied with the allowance that the House made?

RATIONS FUNDS

General HAISLIP. Yes, except for one thing, Senator. When the House gave us back the Sheridan Building, they did not give us rations for the additional men that we will put in that building.

The House gave us the building but not the rations and as it didn't come up at the hearings, I didn't bring it up because I didn't know they were going to give us the building. I didn't feel that I could add on to everything.

Senator HILL. How much additional money would be needed to take care of the matter of rations for the men in that building?

General HAISLIP. $43,500.

Senator HILL. So what you are asking this committee is the amount allowed by the House plus the $43,900? Is that it?

General HAISLIP. $43,500.

Senator HILL. $43,500.

General HAISLIP. That is based, Senator, on the ration allowance that the House gave us. The Bureau of the Budget allowed us only 88 cents. The House gave us 93 cents. That will make the Sheridan Building program complete. That is the only thing we are asking.

Senator HILL. Then the men there would receive the same ration that the men in the other buildings would receive?

General HAISLIP. That is correct; yes, sir.

USE OF SURPLUS COMMODITIES

Senator THYE. Do you get any products from the surplus stocks of the commodity credit?

General HAISLIP. Yes, sir; we do.

Senator THYE. That is what we intended.

General HAISLIP. Yes, sir; we do, and it has been a help to us. We get flour, dried milk, cheese, and some butter. It has been a great help, and we have been very happy to have it. We have no assurance, of course, that we will get it. We cannot bank on it.

Senator THYE. Yes, sir; you are going to get it.

General HAISLIP. We don't have anybody to put up a forfeit, Senator. If we don't get it, we have to have the money to buy it.

Senator THYE. We can just assure you, sir, that you are going to get it.

Senator HILL. Are there any other questions, gentlemen? If not, General, we are always delighted to have you here, and appreciate your statements this morning.

General HAISLIP. Thank you.

Senator HILL. Next is the Interstate Commission on the Potomac River Basin.

Mr. Tisdale?

INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN

STATEMENT OF ELLIS S. TISDALE, DIRECTOR, INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN

APPROPRIATION ESTIMATE

CONTRIBUTION TO INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN

[Contribution to Interstate Commission on the Potomac River Basin:] To enable the Secretary of the Treasury to pay in advance to the Interstate Commission on the Potomac River Basin the Federal contribution toward the expenses of the Commission during the current fiscal year in the administration of its business in the conservancy district established pursuant to the Act of July 11, 1940 (54 Stat. 748), $5,000.

PREPARED STATEMENT

Senator HILL. Mr. Tisdale, we are glad to have you here, sir. We will be delighted to have you proceed in your own way.

Mr. TISDALE. I appreciate the opportunity of this hearing, Mr. Chairman, to speak just a word or two about the progress we are making with reference to the Potomac Commission activities. I have filed with the secretary a brief statement with reference to the

funds which were asked for, for this year, and a brief progress report concerning the water-pollution control, and also a compact revision report.

(The document referred to follows:)

FEDERAL FUNDS FOR INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN BY ELLIS S. TISDALE, DIRECTOR

The Interstate Commission on the Potomac River Basin is submitting a brief statement and explanation about its program carried out with the help of the $5,000 Federal allotment together with the Federal grant from the United States Public Health Service under Public Law 660, the Federal water-pollution program.

Annual appropriation 1957–58	$5,000
Annual appropriation requested 1958–59	5,000

Progress report—Water-pollution control in the Washington metropolitan area

During the past year, the Commission planned its winter meeting for the purpose of charting the progress in water-pollution control in the Washington metropolitan area. The five administrators for the sanitation programs in the District of Columbia, Maryland, Alexandria, Arlington, and Fairfax Counties, set forth the progress made through the expenditure of $58 million in reducing water pollution in the Washington metropolitan area. Reference to section II of the attached publication entitled, "Toward a Clean Potomac," shows in detail these specific improvements. The Anacostia River, and the Potomac River in the Hunting Creek section already have improved substantially with the new Anacostia interceptor in operation and with the complete modern sewage treatment works in Alexandria operating under skilled direction. The new $12 million complete sewage treatment plant at Blue Plains will start operations in 1958. During August 1957, the Commission through its Director, was represented at the hearing by the Public Health Service on interstate pollution of the Potomac, at Charlottesville, Va. This conference attended by officials from Maryland, the District of Columbia, the Federal Government and the Interstate Commission on the Potomac River Basin, dealt with carrying out the new Federal law on interstate water pollution. Testimony was presented showing the badly polluted condition of the Potomac together with the program for the timing of the remedial work by the several jurisdictions.

Abel Wolman report—Control of future water pollution to year 2000

Under the Federal grant program of the Public Health Service, $17,500 was granted to the Interstate Commission on the Potomac River Basin in 1957. A portion of this money was used to retain Abel Wolman & Associates of Baltimore, Md., to prepare a plan for the future to the year 2000, to control water pollution in the Washington metropolitan area. Dr. Wolman's report, together with a brief summary of its provisions prepared by the Commission Director is enclosed. Dr. Wolman recommended an accelerated program to slow down silt deposition in the Washington metropolitan area, estimating that 60 million cubic feet of silt annually is being deposited yearly in this 15-mile section.

He recommended a water-recreation basin in the Potomac Park area, with diversion of stream water and sewage wastes below a proposed barrier dam near the 14th Street Bridge.

He recommended continued building of sewerage systems and treatment works by the 5 jurisdictions, which have spent $58 million in the last 10 years. A metropolitan authority was not recommended, but coordination of the Maryland, Virginia, and the District of Columbia water pollution control programs by the Interstate Commission on the Potomac River Basin.

He recommended a 30-mile conduit to take the treated sewage effluent from Blue Plains treatment plant to the Chesapeake Bay, because of the likelihood of tremendous algae growths in the tidal estuary. These would affect the recreational uses of this section of the river detrimentally.

Compact revision report

The Interstate Commission on the Potomac River Basin carefully studied its compact during 1957, through a committee which visited and conferred with official bodies from all signatory States, the District of Columbia, and the Federal Government. The attached report sets forth their recommendations. This report was approved by the Commission, September 1957. An effort will

be made to carry out the plans for eliminating the financial ceiling, changing the formula for money contributions, and expanding the scope of activities into the water resources conservation field.

DOCUMENTS

1. Toward a Clean Potomac, proceedings winter meeting of Commission 1957.
2. Compact Revision Report, by Interstate Commission on the Potomac River Basin.
3. Wolman report, entitled "A Clean Potomac River in the Washington Metropolitan Area," November 1957.

COMPACT REVISION REPORT

Mr. TISDALE. You will recall that in previous appearances here you have made the suggestion that the States be consulted to see whether or not additional funds could be made available to enlarge the program of the Commission.

I believe I filed with the Secretary a copy of this compact revision report.

Senator HILL. Yes, we have that.

Mr. TISDALE. That indicates that this Commission has approved a plan for revision of the compact, based upon visits to each one of the States, and engineers are now working on revision of the compact, which we hope we can get before the legislatures this coming year. They do not meet every year. So that is coming along well.

Senator HILL. Of course, these changes would have to be approved by legislative action of the several States.

Mr. TISDALE. That is correct. We figure on doing that before coming back to the Congress for approval.

I want to take just a moment, if I may, to record the rather tremendous progress that has been made in this Potomac Basin, in the Washington metropolitan area as a result of the work of the five jurisdictions in this area over the past few years. I speak of that because it was the main theme of our meeting in Washington the winter before last, in January, and the expenditure of $58 million by the District of Columbia, by Maryland authorities, and by the 3 Virginia jurisdictions is now showing results.

This year we will see the results of this work. I do not want to burden you with it, but I have a brief chart here which shows the load in 1955 on the river, the pollution load, which overburdens the river to twice its capacity to handle that pollution. That is shown by this graphic chart.

Senator HILL. I recall the testimony at that time.

Mr. TISDALE. That is correct. Now let's see what the situation is in 1958, this fall, when the new sewage treatment plant at Blue Plains goes into operation. Alexandria, Va., has its fine, modern plant in operation. The Washington Suburban Sanitary Commission is no longer discharging raw sewage into the Anacostia, but the interceptor is now carrying these wastes to the new plant at Blue Plains.

As a result of this remedial work costing nearly $60 million, this year we will see the pollution load coming to the river reduced to such an amount that the river can handle it normally. That is going to make a tremendous change in the Potomac.

Senator HILL. Then there would be no undue burden at all?

Mr. TISDALE. It will make a normal river out of it. It will be available for recreation purposes.

MAINTENANCE OF NORMAL RIVER

Senator HILL. Do you have estimates from your sanitary engineers how long it will continue as a normal river without other things being done?

Mr. TISDALE. That is a very interesting and pertinent question. Thanks to a Federal grant which this Commission is receiving from the Public Health Service under the Federal Water Pollution Control law, last year we got $17,500, the first year. This current year, which we are now operating in, we have received $28,282.

With that additional fund, we have been able to employ outstanding, eminent experts to plan for pollution control in the metropolitan area to the year 2000. Mr. Wolman has been our consultant on that. His report recently was received by the Commission, and we hope that these programs will go forward and will keep up with the situation and we will never get back to the very deplorable pollution situation which we have had here for the past decade.

Senator HILL. In other words, you have had Mr. Wolman prepare the blueprints, so to speak, which, if followed, will keep the Potomac River a normal river so far as taking care of the pollution?

Mr. TISDALE. That is right. Senator. We have that planned, and we are cooperating with these five jurisdictions and with the Public Health Service, which, in August of this past year, held interstate water-pollution hearings at Charlottesville, Va., and this spring held a continuation of the sessions in Washington. Now those five jurisdictions have set up a timetable of remedial work which we hope and anticipate will be effective in controlling the water pollution.

So we are getting along reasonably well, I would say, and making good progress in pollution control of the metropolitan area and of the entire basin. This compact revision, if it is carried through, will enable the Commission to broaden the scope of its activities.

INDUSTRIAL COOPERATION

Senator POTTER. Are you receiving the cooperation of the private industries along the river?

Mr. TISDALE. Very good cooperation, yes.

The West Virginia Pulp & Paper Co. at Luke, Md., which has had a very bad industrial wastes pollution situation, is spending $3 million to handle their industrial wastes. The city of Cumberland, which has been delinquent for some years, has now completed a sewage-treatment plant. So the whole river basin is showing signs of getting back to a more healthy condition.

Senator POTTER. Will this improve the fishing in the Potomac River?

Mr. TISDALE. Yes. Fishing is getting better all the time.

Senator HILL. It is getting better all the time, isn't it? As you remove the pollution, the fish life gets better all the time?

Mr. TISDALE. It is reestablished, yes.

Senator HILL. It reestablishes itself.

Mr. TISDALE. Thanks to our Federal program and the Federal grant, we have been able to modernize our office, we have been able to take on an outstanding water conservation consultant, and we have been able to enlarge our educational interpretive program for the people through television, through press cooperation.

Senator POTTER. Mr. Chairman, I think before our guests leave, we might welcome them. I understand we have a delegation here of foreign students who are visiting Washington for a few days.

I know the chairman would like to welcome them to our committee and to our country and hope they have a very pleasant and profitable stay while they are here.

Senator HILL. As you say, Senator Potter, we not only welcome them, we are not only delighted to have them here, but we are honored.

We appreciate your being here in our country and we hope you have an enjoyable and most profitable stay while you are here.

We feel complimented that you should have come to visit our committee.

Mr. Tisdale, the amount that the House allowed is what you are requesting here this morning?

Mr. TISDALE. Yes, sir.

Senator HILL. Very well. Thank you very much.

Mr. TISDALE. Thank you.

Senator HILL. I appreciate your appearance.

Did you have other questions, Senator Potter?

Senator POTTER. No.

Senator HILL. Very well.

MANPOWER REQUIREMENTS OF HIGHWAY PROGRAM

Senator Hayden requested the Secretary of Labor to give him certain information with respect to manpower requirements of the highway program, as shown on page 6 of these hearings. Information has been supplied in compliance with this request.

(The information referred to follows:)

STATEMENT OF EWAN CLAGUE, COMMISSIONER OF LABOR STATISTICS, ON THE MANPOWER REQUIREMENTS OF THE HIGHWAY PROGRAM

On-site labor

Under provisions of the Federal-Aid Highway and Highway Revenue Acts of 1956, site manpower requirements for construction of new highways would have virtually stabilized during this and the following 3 years (1958–61) at a record of about 400,000 workers (man-years) during the summer quarter of each year, with a slight peaking in 1958.

The Federal-Aid Highway Act of 1958 provides for $1.7 billion in new highway work in addition to sums anticipated by the 1956 legislation. Almost $1.5 billion of this will probably be spent directly on site construction operations. The Bureau of Public Roads has not yet had time to estimate how much of this additional money is likely to be spent in this and in each of the following several years, under the provisions of the new legislation. Pending their estimates, on which they are working at present, the Bureau of Labor Statistics estimates that, should as much as half a billion dollars additional be spent at the site in any 12-month period before the end of calendar year 1959, the highway labor force would be raised by a maximum of about 35,000 full-time site workers at peak operations, to reach a grand total of close to 450,000. This would be 12½ percent above estimates prepared before the 1958 act was passed.

Because of continuously rising productivity and costs, the rise in labor requirements to be expected from the new legislation would be less the longer the work is deferred. Thus, the same dollar-volume rise in 1960 and later years would engender less labor per million dollars spent than in 1958 and 1959.

One man-year of labor at the site of new highway work this year accounts for the expenditure of about $18,000. With continuous improvements in mechanization and organization of highway construction, and expansion in average size of operations, the value per man-year (in 1957 dollars) is expected to rise to almost $20,000 by 1961. The importance of productivity gains in this type of construction can be dramatically illustrated by several groups of relationships, which show, for example (1) that the physical volume (constant dollar value) of work placed per man-year has risen by almost 50 percent since the end of World War II, and (2) that about a third fewer full-time workers are now required to put in place the same volume of work as in 1946. The latter ratio will probably rise to 40 percent by 1961. Thus, in each successive year it takes a substantial rise in highway expenditures to add any significant number of workers to highway payrolls. An additional $300 million would have to be spent in 1959 just to maintain employment at 1958 levels.

Labor requirements per $1 million spent on new highway work are lower on the Interstate System than for the regular federally aided highway program, that is, the ABC system. This is because the Interstate System includes a larger proportion of expensive bridges and other structures; includies more roads that must meet the most rigid standards of durability and design for high-speed, high-volume traffic; and, on the average, involves the use of more and larger mechanized equipment than work on either the primary or secondary roads included in the ABC program. Thus, the value of work placed per man is greater by about 7 percent. It is of interest, then, that expenditures on the Interstate System alone are not likely to exceed one-third of all highway expenditures (Federal, Federal-aid and independently financed State and local) in any one year during the 1958–61 period. In fact, the ratio is likely to be held to nearer one-fourth in 1959, when the bulk of the additional sums authorized in the Highway Act of 1958 for the ABC program would be put in place.

Off-site labor

For every man-year of employment at the site of new highway construction, about 1 man-year of work is required off site in the factories that produce the materials and equipment used, in mines, quarries, and logging camps, and in administrative, transportation and communication services. This off-site employment is a little greater on the interstate than on the other systems, for the same reason that on-site employment is less.

Thus, estimates for 1958–61, based solely on conditions before recent action was taken to expand the highway program, would place the total direct manpower impact of the highway program in each of the years at close to 800,000 full-time workers. If, in any year as much as half a billion dollars more were spent on site, as a result of the 1958 legislation, a total of an additional 70,000 man-years of direct labor would be required—about 35,000 on site and 35,000 off site.

Skill and occupational requirements

Skill is at a premium on highway work today. The proportion of skilled workers to the total has mounted rapidly during the past 2 decades, while, conversely, the ratio of unskilled workers has dropped sharply. By 1958, almost half of all manual workers (excluding clerical, professional, service, and administrative employees) on new highway construction were skilled, compared with two-fifths in 1951, and only about one-fourth in 1936. It now takes only 1 laborer to 2 other workers (including the relatively small number of semiskilled, whose ratio has risen also) to build new highways in 1958, compared with a ratio of a little less then 1 to 1 in 1951, and almost 2 to 1 in 1936.

To be sure, the total number of laborers needed has risen because of the huge expansion in the total highway program. However, the number of laborers on new highway construction has risen 20 percent since 1951 whereas the physical volume of work has more than doubled. Thus the construction of highways has lost a great deal of its former potential for putting unskilled men to work.

The sharpest increases in the skilled group have been among machine operators, who have multiplied along with the variety and versatility of the machines being used for excavating, earthmoving, paving, and materials handling. By now, over one-fourth of all the manual workers are machine operators, compared with one-fifth in 1951, and less than a tenth in 1936. Machine operators (the largest proportion of these are the men who operate the huge behemoths for excavation and earthmoving) account for over 100,000 of the better than 400,000 man-years of labor required for the site highway program this year. The figure was only 55,000 in 1951.

Although other skilled workers as a proportion of the total have risen much less dramatically than machine operators, their numbers have increased more sharply even than the physical volume of highway work. The proportionate need for a few skills has declined—for example, carpenters and structural iron workers, because of the greater prevalence today of prefabricated forms and precast concrete. However, because of the increased volume of highway construction, the actual number of carpenters and structural iron workers has risen moderately.

Explanation of estimates

Construction workers rarely work full time, especially on highway work, which is more seasonal than almost any other kind of construction. Consequently, figures presented here in terms of man-years or full-time workers are minimum estimates in terms of total number of workers who would be employed. It may be roughly calculated that an average of about 10 percent more employees would be included on construction payrolls than would be shown by the full-time equivalent figures used here.

Estimates of off-site labor do not include the secondary employment engendered by new highway construction, such as the work which stems from the production and marketing of the consumer goods purchased by the highway construction workers; or employment induced by the construction and operation of service stations, garages, motels, restaurants and other enterprises which service the vehicles and motorists using the highways.

The off-site employment estimates have been developed from the Labor Department's interindustry studies based on conditions in 1947. However, in applying the interindustry relations data, up-to-date patterns of materials, services, and equipment used in highway work were derived from data obtained from the Bureau of Public Roads, and adjustments were made for changes in prices and productivity.

Estimates of site manpower requirements were developed from data obtained from the Bureau of Public Roads for federally aided highway projects completed in 1956. The skill and occupational distribution is based on direct reports to the Labor Department for about 1,400 projects completed or underway in 1956–57.

Senator HILL. The committee will now stand in recess until 10 a. m. Monday morning, April 14.

(Whereupon, at 11:45 a. m., Thursday, April 3, 1958, the committee recessed, to reconvene at 10 a. m. Monday, April 14, 1958.)

LABOR—HEALTH, EDUCATION, AND WELFARE APPROPRIATIONS, 1959

MONDAY, APRIL 14, 1958

UNITED STATES SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D. C.

The subcommittee met at 10 a. m., pursuant to recess, in room F-82, the Capitol, Hon. Lister Hill (chairman of the subcommittee) presiding.

Present: Senators Hill, Hayden, Thye, Smith, and Dworshak.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

APPEALS FROM ACTIONS OF THE HOUSE

Senator HILL. The committee will kindly come to order.

I have here a letter of April 11 from the Acting Secretary, Mr. Elliot Richardson, of the Department of Health, Education, and Welfare, with reference to the appeals from the different actions of the House. I will put that letter in the record at this point.

(The letter referred to follows:)

THE SECRETARY OF HEALTH, EDUCATION, AND WELFARE,
Washington, April 11, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Departments of Labor, and Health, Education, and Welfare, and Related Agencies, Committee on Appropriations, United States Senate, Washington, D. C.

DEAR MR. CHAIRMAN: The House, in passing H. R. 11645, made reductions in 13 items amounting to $1,715,000. I have carefully reviewed each of the programs affected by these reductions and strongly recommend that the Senate restore funds in 5 of these appropriations for an increase of $964,000 over the House allowance for these items.

Including in the amount not appealed is $690,000 requested to carry out civil-defense functions delegated to this Department by the Federal Civil Defense Administration. With respect to this function, there was a change during consideration of this budget by the House committee whereby a separate presentation was made to the Independent Offices Subcommittee of the House to include funds for the delegate agencies in the FCDA budget rather than in the individual agency budgets. This resulted in the House allowing $250,000 for delegate civil-defense activities. It is my understanding that the Administrator of Civil Defense will include the $690,000 for our Department in his appeal to the Senate for inclusion in his estimate.

The House allowed increases in several appropriations over the budget estimate. Our review of these proposed increases indicates that they are for desirable objectives and can be effectively used. However, with respect to the largest increase for research at the National Institutes of Health amounting to $8,200,000, it is recommended that the funds not be applied as recommended in the House report but, rather, be used to support the full cost of research supported by grants. As you know, the National Institutes of Health does not finance the full cost of research in that indirect costs are restricted to 15 percent of direct costs, while it is

estimated that these indirect costs average about 25 percent. The budget proposed payment of full indirect costs. The House, however, proposes to continue the limitation of 15 percent. I firmly believe that the long-range effect of paying the full cost of research will be of far greater importance to a sound medical-research program than will result from the application of these funds to an increased number of research projects. I, therefore, recommend a redistribution of the increased funds and the elimination of the restrictive language proposed by the House.

In addition, there are other House actions related to language provisions which I believe will impede the operations of certain of the operating agencies and two of which have departmentwide significance.

Concerning these two provisions, I recommend that the Senate insert language which we requested and the House disallowed extending the availability of construction funds to June 30, 1960, so that the Department will be able to pursue without interruption the completion of projects underway at the close of 1959. I also recommend that the Senate delete the language inserted by the House which restricts advances to States for the first quarter of the next succeeding fiscal year to the amount advanced in the preceding fiscal year.

There are also two additional language provisions which establish an unreasonable time limitation on the obligation of construction funds. The first pertains to "Construction of mental-health facilities, Territory of Alaska," where the language limits the availability of funds to June 30, 1960. As a practical matter, construction of the facilities involved will extend beyond that time, and it is recommended that these funds continue to be available "until expended." The second case pertains to "Construction of Indian health facilities." In this case, a language change which would merge all balances from prior-year appropriations into a single fund and continue their availability until 1960 was proposed in the 1959 budget. The House action deletes the language authorizing merging of prior-year balances, and it is recommended that the original budget language be reinstated.

Each requested amendment will be explained and justified fully to your committee during the course of the hearings on this bill. If any further information is desired by you or the committee in connection with these amendments, we shall be glad to furnish it promptly.

Sincerely yours,

ELLIOT L. RICHARDSON,
Acting Secretary.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

(Amendments requested to H. R. 11645, 85th Congress, in the Senate of the United States)

HOWARD UNIVERSITY

SALARIES AND EXPENSES

1. Page 14, line 22, after the comma strike out "$3,900,000" and insert in lieu thereof "$4,000,000".

OFFICE OF EDUCATION

ASSISTANCE FOR SCHOOL CONSTRUCTION

2. Page 17, line 5, after the comma strike out "$750,000" and insert in lieu thereof "$850,000".

SALARIES AND EXPENSES

3. Page 17, line 20, before the comma strike out "$7,800,000" and insert in lieu thereof "$7,900,000".

PUBLIC HEALTH SERVICE

ASSISTANCE TO STATES, GENERAL

4. Page 20, line 20, strike out "$22,000,000" and insert in lieu thereof "$22,574,000".

CONSTRUCTION, MENTAL HEALTH FACILITIES, TERRITORY OF ALASKA

5. Page 21, line 16, strike out "June 30, 1960" and insert in lieu thereof "expended".

SANITARY ENGINEERING ACTIVITIES

6. Page 23, line 10, strike out "$12,725,000" and insert in lieu thereof "$12,815,000".

CONSTRUCTION OF INDIAN HEALTH FACILITIES

7. Page 26, line 17, after the word "Welfare" insert:
"*Provided further,* That the unexpended balance of appropriations heretofore granted under this head shall be merged with this appropriation."

GENERAL RESEARCH AND SERVICES, NATIONAL INSTITUTES OF HEALTH

8. Page 27, line 1, strike out "$17,742,000" and insert in lieu thereof "$18,538 000".

NATIONAL CANCER INSTITUTE

9. Page 27, line 25, strike out "$57,423,000" and insert in lieu thereof "$57,-702,000".

MENTAL HEALTH ACTIVITIES

10. Page 28, line 4, strike out "$40,397,000" and insert in lieu thereof "$38,-697,000".

NATIONAL HEART INSTITUTE

11. Page 28, line 7, strike out "$36,212,000" and insert in lieu thereof "$36,-344,000".

DENTAL HEALTH ACTIVITIES

12. Page 28, line 12, strike out "$6,543,000" and insert in lieu thereof "$6,-531,000".

ARTHRITIS AND METABOLIC DISEASE ACTIVITIES

13. Page 28, line 16, strike out "$21,092,000" and insert in lieu thereof "$21,-535,000".

ALLERGY AND INFECTIOUS DISEASE ACTIVITIES

14. Page 28, line 20, strike out "$17,997,000" and insert in lieu thereof "$18,-399,000".

NEUROLOGY AND BLINDNESS ACTIVITIES

15. Page 29, line 3, strike out "$21,977,000" and insert in lieu thereof "$21,-637,000".

TITLE II—GENERAL PROVISIONS

16. Page 37, strike out lines 12 through 16.

TITLE II—GENERAL PROVISIONS

17. Page 37, following line 11, insert:
"SEC. 207. None of the obligational authority available to the Department of Health, Education, and Welfare for planning and/or construction of buildings shall remain available after June 30, 1960."

TITLE IX—GENERAL PROVISIONS

18. Page 42, strike out lines 1 through 4.

HISTORY OF 1959 BUDGET REQUESTS

Senator HILL. The subcommittee has been supplied, upon its request, a table entitled "History of 1959 Budget Requests," showing the preliminary agency requests to the Department, the preliminary Department requests to the Bureau of the Budget, the final Department requests to the Bureau of the Budget, and, finally, the President's budget estimate. This table will be placed in the record at this point.

(The table referred to follows:)

History of 1959 Budget Requests

Department of Health, Education, and Welfare

Comparison of operating agency requests, Department requests, and President's budget estimate, fiscal year 1959

	Preliminary agency request to Department	Preliminary Department request to Bureau of Budget	Final Department request to Bureau of Budget	President's budget
American Printing House for the Blind: Education of the blind	$400,000	$400,000	$400,000	$400,000
Food and Drug Administration:				
Salaries and expenses	11,530,000	10,980,000	10,980,000	9,410,000
(Includes civil defense)	(180,000)	(180,000)	(180,000)	(110,000)
Salaries and expenses, certification, inspection, and other services	(1,254,500)	(1,254,000)	(1,254,500)	(1,254,500)
Construction	20,000,000	17,000,000	17,000,000	----------
Freedmen's Hospital: Salaries and expenses	3,533,000	3,250,000	3,250,000	2,975,000
Gallaudet College:				
Salaries and expenses	910,000	795,000	795,000	785,000
Construction	2,388,000	2,388,000	2,388,000	123,000
Howard University:				
Salaries and expenses	5,455,000	4,100,000	4,100,000	4,000,000
Plans and specifications	276,000	171,000	171,000	171,000
Construction of buildings	1,105,000	----------	----------	----------
Construction of buildings (liquidation of contract authority)	1,283,000	1,283,000	163,000	163,000
Office of Education:				
Promotion and further development of vocational education	34,897,081	33,522,000	33,750,081	33,750,081
Further endowment of colleges of agriculture and mechanic arts	2,501,500	2,501,500	2,501,500	2,501,500
Grants for library services	7,500,000	5,000,000	5,000,000	3,000,000
Assistance for school construction	950,000	950,000	950,000	850,000
Salaries and expenses	9,021,000	8,381,000	[1] 9,177,140	7,950,000
(Includes civil defense)	(121,000)	(121,000)	(121,000)	(50,000)
Office of Vocational Rehabilitation:				
Grants to States and other agencies	54,900,000	52,800,000	52,400,000	50,600,000
Training and traineeships	6,600,000	5,500,000	5,500,000	4,800,000
Salaries and expenses	1,600,000	1,480,000	1,480,000	1,400,000
Public Health Service:				
Assistance to States, general	33,975,000	23,388,000	23,388,000	22,889,000
(Includes civil defense)	(475,000)	(475,000)	(475,000)	(315,000)
Grants and special studies, Alaska	2,405,000	2,165,000	2,165,000	2,165,000
Control of venereal diseases	5,800,000	4,415,000	4,415,000	4,400,000
Control of tuberculosis	7,250,000	7,000,000	7,000,000	5,386,000
Communicable disease activities	7,200,000	6,250,000	6,250,000	6,200,000
Sanitary engineering activities	17,500,000	13,420,000	13,420,000	12,815,000
Grants for waste treatment works construction	50,000,000	35,000,000	35,000,000	45,000,000
Grants for hospital construction	136,200,000	121,200,000	121,200,000	75,000,000
Salaries and expenses, hospital construction services	1,670,000	1,470,000	1,470,000	1,320,000
(Includes civil defense)	(20,000)	(20,000)	(20,000)	(20,000)
Hospitals and medical care	51,000,000	47,000,000	47,000,000	44,309,000
Foreign quarantine activities	5,500,000	4,300,000	4,300,000	3,983,000
Indian health activities	48,000,000	45,000,000	45,000,000	40,225,000
Construction of Indian health facilities	7,500,000	6,200,000	6,200,000	2,374,000
National Institutes of Health:				
General research and services	22,972,000	16,104,000	14,526,000	17,742,000
National Cancer Institute	59,154,000	58,260,000	56,955,000	55,923,000
Mental health activities	40,428,000	39,095,000	38,605,000	37,697,000
National Heart Institute	35,695,000	38,151,000	35,936,000	34,712,000
Dental health activities	7,780,000	6,797,000	6,542,000	6,293,000
Arthritis and metabolic disease activities	20,436,000	22,046,000	20,696,000	20,592,000
Allergy and infectious disease activities	21,034,000	18,982,000	17,653,000	17,497,000
Neurology and blindness activities	21,294,000	22,775,000	21,387,000	20,727,000
Subtotal, National Institutes of Health	228,793,000	222,210,000	[2] 212,300,000	211,183,000
Grants for construction of research facilities	30,000,000	30,000,000	30,000,000	30,000,000
Research facilities construction and site acquisition	300,000	200,000	200,000	----------
Construction of general office building	5,000,000	5,000,000	5,000,000	----------
Retired pay of commissioned officers	(1,650,000)	(1,650,000)	(1,606,000)	(1,600,000)
Construction of Communicable Disease Center	----------	[3] 13,225,000	13,225,000	----------

See footnotes at end of table.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE—Continued

Comparison of operating agency requests, Department requests, and President's budget estimate, fiscal year 1959—Continued

	Preliminary agency request to Department	Preliminary Department request to Bureau of Budget	Final Department request to Bureau of Budget	President's budget
Public Health Service—Continued				
Construction of dental research building	$3,724,000	$3,724,000	$3,724,000	
Operations, National Library of Medicine	1,554,000	1,452,000	1,452,000	$1,415,000
Construction of library facilities	6,500,000	8,500,000	7,300,000	
Salaries and expenses	5,952,000	5,705,000	5,705,000	5,325,000
(Includes civil defense)	(445,000)	(445,000)	(445,000)	(65,000)
Buildings and facilities, Sanitary Engineering Center, Cincinnati	360,000			
Construction of mental health facilities, Territory of Alaska	[4] 6,000,000	6,500,000	[4] 6,000,000	6,500,000
Construction of occupational health building	600,000			
Construction of Arctic health research building	367,000			
St. Elizabeths Hospital:				
Salaries and expenses	3,323,000	3,323,000	3,323,000	3,154,000
Major repairs and preservation of buildings and grounds	742,000	742,000	472,000	87,000
Construction, treatment, and cafeteria building	4,130,000	4,130,000	4,155,000	
Construction, treatment building	125,000	125,000	125,000	125,000
Social Security Administration:				
Salaries and expenses, BOASI	(129,842,000)	(129,842,000)	(134,885,000)	(133,300,000)
Grants to States for training of public welfare personnel	2,500,000	2,500,000	2,500,000	
Grants to States for public assistance	1,735,000,000	1,735,000,000	1,806,400,000	1,806,400,000
Salaries and expenses, Bureau of Public Assistance	2,335,000	2,335,000	2,335,000	2,040,000
(Includes civil defense)	(117,000)	(117,000)	(117,000)	(60,000)
Salaries and expenses, Children's Bureau	2,150,000	2,150,000	2,150,000	2,013,000
Grants to States for maternal and child welfare	43,500,000	41,500,000	41,500,000	41,500,000
Cooperative research or demonstration projects in social security	2,080,000	2,080,000	2,075,000	
Salaries and expenses, Office of the Commissioner	320,000	320,000	320,000	314,000
OASI transfer	(250,000)	(250,000)	(250,000)	(246,000)
Salaries and expenses, White House Conference on Children and Youth	150,000	150,000	150,000	150,000
Office of the Secretary:				
Salaries and expenses, Office of the Secretary	[1] 1,986,500	1,943,500	1,927,500	1,819,000
(Includes civil defense)	(25,500)	(25,500)	(25,500)	(10,000)
OASI transfer	(278,000)	(271,000)	(268,000)	(263,000)
Salaries and expenses, Office of Field Administration	2,612,000	2,519,000	2,519,000	2,418,000
(Includes civil defense)	(98,000)	(98,000)	(98,000)	(60,000)
OASI transfer	(739,000)	(706,000)	(706,000)	(702,000)
Salaries and expenses, Office of the General Counsel	616,500	576,500	576,500	505,000
(Includes civil defense)	(4,500)	(4,500)	(4,500)	
OASI and Food and Drug transfers	(515,000)	(488,000)	(485,000)	(475,000)
Surplus property utilization	711,000	641,000	641,000	632,000
(Includes civil defense)	(134,000)	(134,000)	(134,000)	(130,000)
Total appropriation	2,630,280,581	2,563,860,500	2,622,888,721	2,504,524,581
(Includes civil defense)	(1,620,000)	(1,620,000)	(1,620,000)	(820,000)
Transfers	(1,782,000)	(1,715,000)	(1,709,000)	(1,686,000)

[1] Represents revised estimate of requirements developed jointly by the Office of Education and the Department subsequent to preliminary submission.
[2] In addition, there was separately requested $8,600,000 to provide for full indirect costs of research supported by grants.
[3] Requested as a 1958 supplemental appropriation in the amount of $13,225,000.
[4] Requests contemplated a 1958 supplemental appropriation for planning funds in the amount of $500,000.

American Printing House for the Blind

STATEMENT OF JAMES F. KELLY, DEPARTMENT BUDGET OFFICER, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

APPROPRIATION ESTIMATE

Education of the Blind

[Education of the blind:] For carrying out the Act of March 3, 1879, as amended (20 U. S. C. 101–105), [$328,000] *$400,000.*

Amounts available for obligation, 1958 and 1959

Appropriation:	
1958	$328, 000
1959	400, 000

Obligations by activity, 1958 and 1959

Activity	1958 estimate		1959 estimate		Increase or decrease	
	Positions	Amount	Positions	Amount	Positions	Amount
Grants for educational materials (total obligations)	--------	$328, 000	--------	$400, 000	--------	+$72, 000

Obligations by object

Grants, subsidies, and contributions:	
1958 estimate	$328, 000
1959 estimate	400, 000
Increase or decrease	+72, 000

Summary of changes

1958 appropriation	$328, 000
1959 appropriation	400, 000
Net change requested	+72, 000
Increases:	
Increase of 919 in number of blind pupils at a per capita rate of $33.88	$31, 126
Increase of approximately $3.65 in the per capita rate for base number of 11,183 blind pupils to bring them to $33.88 rate	40, 874
Gross increase	72, 000

PREPARED STATEMENT

Senator Hill. We are happy to have with us this morning Mr. James F. Kelly, who will present a statement in behalf of Mr. Finis E. Davis, superintendent of the American Printing House for the Blind.

Mr. Kelly. Mr. Chairman, Mr. Davis couldn't be here this morning, and asked if I could present his statement. I would like to file his statement and just say that the budget request is the maximum

authorization under the law, $400,000, for the provision of books and materials for the education of the blind, and the increase, representing $72,000, is because of the increased number of blind students that are expected to be enrolled in fiscal 1959.

Senator HILL. The budget allowed the full amount as authorized by the statute.

Mr. KELLY. And the House approved that allowance.

Senator HILL. Fine. We will put his statement in full in the record. Thank you, Mr. Kelly.

(The statement referred to follows:)

STATEMENT OF SUPERINTENDENT, AMERICAN PRINTING HOUSE FOR THE BLIND ON EDUCATION OF THE BLIND

Program of the American Printing House

The American Printing House for the Blind is a nonprofit educational institution, located in Louisville, Ky. Each year, the printing house receives Federal appropriations to be used to provide free braille textbooks and other educational materials needed for the education of the Nation's blind children. The appropriation for the 1959 fiscal year will be the 80th annual provision of funds for this purpose.

The printing house serves two groups of blind schoolchildren. Educational materials are provided (1) to students who attend special schools and classes for the blind and (2) to blind students who attend regular public schools and classes. This latter group of students was brought within the program of the printing house by the enactment of Public Law 922 in the 84th session of Congress.

1959 budget estimate

The 1959 budget estimate of $400,000 represents an increase of $72,000 over the appropriation for fiscal year 1958.

It is estimated that a total enrollment of 12,102 will form the basis for distribution of materials under the 1959 appropriation. This enrollment includes an estimated additional 919 pupils attending schools for the blind and regular public schools at this time, who will be eligible to receive books and materials from the American Printing House for the Blind. The application of the total budget estimate to the total estimated enrollment will produce a $33.88 per capita rate. Because of increased production costs, this $33.88 rate will provide in 1959 fewer textbooks and educational materials than were supplied under the approximately $30 rate prevailing in fiscal years 1957 and 1958.

Factors underlying the requested increase

There are two factors underlying the increased appropriation request for 1958. One is the anticipated increased enrollment of blind students, and the other is the increased cost of producing books and educational materials for the blind.

Increased enrollment

Increased numbers of blind children are enrolled in the special schools and classes for the blind and in the regular public-school system each year, due to:

1. The general increase in the school population at the primary level.
2. A decrease proportionately in the number of high-school graduates because of low birthrates during the late 1930's and early 1940's.
3. The additional increase caused by the high incidence in recent years of congenital blindness resulting from retrolental fibroplasia. The causative factor of this disease has now been discovered, but the numbers of children affected by it who enroll in the public-school systems continue to increase and are expected to reach their peak in 1960.

Provision is made in the 1959 estimate for 919 more students in the specialized schools and classes for the blind and in the regular public schools, all of whom are now eligible to receive the books and materials distributed by the printing house through the Federal funds.

Increased production costs

The unit costs of specialized books and materials for the blind tend to be high, even though the centralized facilities of the printing house permit it to achieve many economies of production. The passage of the amended minimum-wage law in 1956 increased these costs materially (raw materials as much as 15 percent,

and labor costs as much as 27 percent in some departments, particularly the braille printing and binding departments). Up to the present, these increases in production costs have not been met in the base per capita rate for 1958, particularly because of the unexpected increase in the number of children who became eligible for services through the passage of Public Law 922.

Taking into account the various factors of production, it was estimated that a per capita allotment rate of approximately $35 was necessary to provide in fiscal year 1958 the same minimum amount of materials for the estimated 9,650 blind students as were supplied schools during the 1956 fiscal year at the approximately $30 per capita rate prevailing during that year. The 1958 estimate as originally submitted to the Bureau of the Budget and Congress was designed to provide the printing house with sufficient funds to achieve the $35 per capita rate. However, since the original estimate of eligible students in 1958 was understated by 1,533, the per capita rate remained in 1958 at approximately the same level as that which prevailed in 1957. This left the increase in production costs uncompensated in 1958. It is for this reason that an increase in the per capita rate from $30.22 for 1958 to $33.88 for 1959 is being requested, being the total amount permitted by the present authorization.

Recently the board of trustees and the staff of the printing house announced the development of a new process of braille printing which will make possible the reproduction of small editions at a reasonable cost, and, more important, will make available the almost unlimited choice of textbooks so badly needed in the education of blind children in the widely varying educational situations now employed in this country.

Technically, the new process utilizes the vacuum forming of plastics, which, of course, is not new to braille. However, instead of making the plastic sheet the end product for reading (which has many drawbacks, such as difficulty of binding the sheets, and unpleasantness to the finger), double plastic printing plates are made, similar to the metal plates used for printing books, and these master plates are then used to print small runs of a desired title. The purpose of this process is to take advantage of the work of the volunteer transcribers who make the original single, hand-transcribed paper copies. The embossed paper sheets brailled by the transcribers are used as the masters for making plastic printing plates, plastic molds being taken of both sides of each sheet, which are then fastened in registry with each other to form the male and female printing dies, or plates, to be used just like ordinary braille plates for printing on paper. From there on, standard procedures for the binding of braille books are employed.

As can be seen from the above simplified description, the effective use of the new process will require the cooperative efforts of the volunteer hand transcribers, the schools and classes for the blind, and the printing house. As planned, the project will work in this manner:

1. The printing house will undertake to set up a master catalog of all hand-transcribed textbooks, similar to the catalog of hand-transcribed books carried on by the Library of Congress, but it will be limited to textbooks for the 12 elementary and secondary school grades. The public-school classes and others who are now using the services of hand transcribers will be asked to register with the printing house all of the transcribed texts embossed by the volunteers who work for them. This information will be compiled into a master card catalog, constantly being added to at all times. It will then be possible for anyone in need of a particular textbook not in the regular American Printing House braille catalog to write to the printing house to see if the book has been transcribed somewhere. If so, the printing house can ask to borrow the copy for a limited period of time, say a week, make the plastic plates, and print off a copy or two immediately. Such plates would be permanent up to a total of 50 copies, so that future reprints can be made as needed, without having to go back to the original paper copy and make new plates. The printing house will undertake to store the plastic plates against such requests, just as it now does with the metal plates it produces regularly in its stereograph department.

2. Because the original emobssing will be done on a volunteer basis, the cost of the plastic plates will be confined merely to the cost of making the vacuum-formed sheets, etc., which is estimated at between 15 and 20 cents, as opposed to $1.50 and above for regular metal printing plates. Printing and binding costs will, of course, be a good deal higher than regular printing house catalog items because of the small editions of 1 or 2 copies, as opposed to the larger editions of 150 or 200 or more copies of regular printings. The end result, however, it is hoped, will be a production cost in the neighorhood of present printing house catalog prices for larger runs on metal plates.

In light of the above facts, it is estimated that the broadened program of the printing house, together with the increased production costs, will require an appropriation of $400,000, plus the permanent appropriation of $10,000, for the fiscal year 1959.

Food and Drug Administration

STATEMENTS OF GEORGE P. LARRICK, COMMISSIONER, ACCOMPANIED BY SIDNEY B. COHEN, FINANCIAL MANAGEMENT OFFICER, AND JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

"[Salaries and expenses:] For necessary expenses [for carrying out the Federal Food, Drug, and Cosmetic Act, as amended (21 U. S. C. 301–392); the Tea Importation Act, as amended (21 U. S. C. 41–50); the Import Milk Act (21 U. S. C. 141–149); the Federal Caustic Poison Act (15 U. S. C. 401–411); and the Filled Milk Act, as amended (21 U. S. C. 61–64);] *not otherwise provided for, of the Food and Drug Administration,* including purchase of not to exceed [eighty-nine] *twenty-five* passenger motor vehicles [of which fifty-one shall be] for replacement only; reporting and illustrating the results of investigations; purchase of chemicals, apparatus, and scientific equipment; payment in advance for special tests and analyses by contract; and payment of fees, travel, and per diem in connection with studies of new developments pertinent to food and drug enforcement operations; [$9,300,000] *$9,410,000.*"

Amounts available for obligation

	1958 appropriations	1959 budget to Congress	1959 House allowance
Appropriation or estimate	$9,300,000	$9,410,000	$9,300,000
Total available for obligation	9,300,000	9,410,000	9,300,000

Obligations by activities

Description	1958 estimate		1959 estimate		House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Enforcement operations	1,102	$8,870,100	1,139	$8,866,600	1,139	$8,866,600
2. Civil-defense functions			12	110,000		
3. General administration	78	429,900	78	433,400	78	433,400
Total obligations	1,180	9,300,000	1,229	9,410,000	1,217	9,300,000

Obligations by objects

	1958 appropriation	1959 budget to Congress	1959 House allowance
Total number of permanent positions	1,180	1,229	1,217
Full-time equivalent of all other positions	2	2	2
Average number of all employees	1,095	1,179	1,167
Number of employees at end of year	1,150	1,200	1,188
Average salaries and grades:			
General schedule grades:			
Average salary	$5,965	$5,997	$5,988
Average grade	GS-8.2	GS-8.3	GS-8.2
01 Personal services:			
Permanent positions	$6.517,500	$7,018,890	$6,939,000
Positions other than permanent	4,000	4,000	4,000
Regular pay above 52-week base	27,000	28,110	27,800
Payment above basic rates	12,000	12,000	12,000
Other payments for personal services	11,500	11,500	11,500
Total personal services	6,572,000	7,074,500	6,994,300
02 Travel	400,300	457,800	451,300
03 Transportation of things	66,200	52,500	51,700
04 Communication services	102,000	105,400	104,300
05 Rents and utility services	1,700	1,700	1,700
06 Printing and reproduction	62,700	64,800	62,700
07 Other contractual services	147,000	116,700	115,000
Services performed by other agencies	78,000	66,600	63,600
08 Supplies and materials	246,700	298,700	292,700
Samples	98,600	104,600	104,600
09 Equipment	1,114,800	609,100	605,600
11 Grants, subsidies, and contributions: Contributions to retirement fund	405,000	452,600	447,500
13 Refunds, awards, and indemnities	3,000	3,000	3,000
15 Taxes and assessments	2,000	2,000	2,000
Total obligations	9,300,000	9,410,000	9,300,000

Summary of changes

		Positions	Amount
1958 actual appropriation		1,180	$9,300,000
1958 supplemental appropriation			
Total appropriation		1,180	9,300,000
Deduct nonrecurring items:			
Purchase of 89 automobiles, 51 of which are replacements, net in fiscal year 1958	$128,400		
Equipment replacement and modernization of facilities and for new staff in fiscal year 1958	694,675		
Preparation of Detroit district headquarters in fiscal year 1958	260,000		−1,083,075
Revised 1958 base		1,180	8,216,925
1959 appropriation request		1,229	9,410,000
Net change requested		+49	1,193,075

	1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount
Increases:				
For mandatory items:				
Retirement contributions annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)		$29,500		$29,500
Annualization costs for additional positions authorized in 1958		220,000		220,000
Subtotal		249,500		249,500
For program items:				
Accelerated field inspectional travel		18,000		18,000
Replacement of 25 automobiles, net		35,000		35,000
Equipment replacement and modernization of facilities		457,575		457,575
Detroit district requirements for initial staff, retirement contributions, and all other auxiliary expenses	37	323,000	37	323,000
Delegated civil defense functions for initial staff, retirement contributions, and all other auxiliary expenses	12	110,000		
Total change requested	49	1,193,075	37	1,083,075

Effect of House Action

The allowance of $9,300,000 included in H. R. 11645 is $110,000 below the budget estimate of $9,410,000.

The $110,000 deleted is for civil defense activities which we understand is being requested in the Independent Offices Subcommittee for inclusion in the Federal civil defense appropriation for allocation to the agencies to whom certain civil defense functions have been delegated.

Appropriation Estimate

"SALARIES AND EXPENSES, CERTIFICATION, INSPECTION, AND OTHER SERVICES

"[Salaries and expenses, certification, inspection, and other services:] For expenses necessary for the certification or inspection of certain products, and for the establishment of tolerances for pesticides, in accordance with sections 406, 408, 504, 506, 507, 604, 702A, and 706 of the Federal Food, Drug, and Cosmetic Act, as amended (21 U. S. C. 346, 346a, 354, 356, 357, 364, 372a, and 376), the aggregate of the advance deposits during the current fiscal year to cover payments of fees for services in connection with such certifications, inspections, or establishment of tolerances, to remain available until expended. The total amount herein appropriated shall be available for [personal services;] purchase of chemicals, apparatus, and scientific equipment; [purchase of not to exceed four passenger motor vehicles for replacement only;] expenses of advisory committees; and the refund of advance deposits for which no service has been rendered."

Amounts available for obligation

	1958 appropriation	1959 budget to Congress	1959 House allowance
Appropriation or estimate	$1,254,500	$1,254,500	$1,254,500
Prior year balance available	384,784	415,088	415,088
Total available for obligation	1,639,284	1,669,588	1,669,588
Balance available in subsequent year	−415,088	−415,088	−415,088
Obligations incurred	1,224,196	1,254,500	1,254,500

Obligations by activities

Description	1958 estimate		1959 estimate		House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Certification services	157	$1,199,696	157	$1,231,600	157	$1,231,600
2. Pesticides tolerances	2	19,500	2	19,600	2	19,600
3. Refunds	--------	5,000	--------	3,300	--------	3,300
Total obligations	159	1,224,196	159	1,254,500	159	1,254,500

Obligations by objects

	1958 appropriation	1959 budget to Congress	1959 House allowance
Total number of permanent positions	159	159	159
Full-time equivalent of all other positions			
Average number of all employees	151	151	151
Number of employees at end of year	155	155	155
Average salaries and grades:			
General schedule grades:			
Average salary	$5,451	$5,510	$5,510
Average grade	GS-7.3	GS-7.3	GS-7.3
01 Personal services:			
Permanent positions	$825,050	$825,050	$825,050
Positions other than permanent			
Regular pay above 52-week base	3,250	3,250	3,250
Payment above basic rates	25,500	25,500	25,500
Other payments for personal services			
Total personal services	853,800	853,800	853,800
02 Travel	12,700	22,700	22,700
03 Transportation of things	12,200	12,200	12,200
04 Communication services	4,200	4,200	4,200
05 Rents and utility services			
06 Printing and reproduction	7,300	7,300	7,300
07 Other contractual services	21,800	21,800	21,800
Services performed by other agencies	60,896	73,200	73,200
08 Supplies and materials	144,500	144,500	144,500
Samples			
09 Equipment	52,600	60,600	60,600
11 Grants, subsidies, and contributions: Contributions to retirement fund	48,300	50,000	50,000
13 Refunds, awards, and indemnities	5,000	3,300	3,300
15 Taxes and assessments	900	900	900
Total obligations	1,224,196	1,254,500	1,254,500

Summary of changes

	Positions	Amount
1958 estimated appropriation	159	$1,254,500
Less increase in reserve		30,304
1958 obligational authority	159	1,224,196
Deduct nonrecurring items: Anticipated refunds		−1,700
Revised 1958 base	159	1,222,496
1959 appropriation request	159	1,254,500
Net change requested		+32,004

	1959 budget estimates		1959 House allowance	
	Positions	Amount	Positions	Amount
Increases:				
For mandatory items: Retirement contributions annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)		$1,700		$1,700
For program items: Acceleration of travel, other contractual services, and purchase of equipment for the certification services activity		30,304		30,304
Total change requested		32,004		32,004

New positions requested, fiscal year 1959

	Grade	Annual salary
Bureau of Biological and Physical Sciences:		
Technologist	GS-14	$10,320
Bacteriologist	GS-12	7,570
Bacteriologist	GS-11	6,390
Chemist	GS-11	7,035
Bacteriologist	GS-9	5,440
Technician	GS-5	3,670
Total (6)		40,425
Bureau of Program Planning and Appraisal:		
Training officer	GS-13	8,990
4 training officers	GS-12	30,280
Clerk	GS-5	3,670
Total (6)		42,940
Bureau of Field Administration for Detroit District		
Chief of District	GS-14	10,320
Assistant Chief of District	GS-13	8,990
Chief chemist	GS-13	8,990
Chief inspector	GS-13	8,990
4 chemists	GS-11	28,140
4 inspectors	GS-11	25,560
5 chemists	GS-9	30,575
10 inspectors	GS-9	54,400
Chief clerk	GS-7	4,525
2 clerks	GS-5	7,340
3 clerks	GS-4	10,245
Laboratory aid	GS-4	3,415
Storekeeper	GS-3	3,175
2 laboratory aids	GS-2	5,920
Total (37)		210,585
Total new positions, all activities (49)		293,950

PREPARED STATEMENT

Senator HILL. We have with us our friends of the Food and Drug Administration.

Mr. Larrick, we are happy to have you here with us this morning, and we will be glad to have you proceed in your own way.

Mr. LARRICK. Thank you, Mr. Chairman.

To conserve the time of the committee, we are submitting a prepared statement for the record, and, with your permission, I should like to summarize the Food and Drug Administration's activities and the contents of the Budget request for fiscal year 1959.

(The material referred to follows).

STATEMENT OF COMMISSIONER OF FOOD AND DRUGS

The 1959 requests for the Food and Drug Administration programs are at approximately the same level as was appropriated for in 1958. This level of operation will permit a continued strengthening of the administration of the food, drug, and cosmetic laws. As you know, the Citizens Advisory Committee, which studied the responsibilities and facilities of the Food and Drug Administration recommended a three- to four-fold expansion within a 5- to 10-year period. Since fiscal year 1956, which was the base year from which the expansion program was launched, there have been successive personnel increases of 15 percent in both fiscal years 1957 and 1958. The 1959 budget continues to maintain this level of employment, and permits a small increase to initially staff the Detroit district office authorized in fiscal year 1958. Funds are also included to continue the replacement and modernization of Food and Drug Administration equipment and facilities initiated last fiscal year.

The Budget estimate also contains an additional $110,000 to enable the Food and Drug Administration to carry out its assigned responsibilities under the civil defense program.

The budget contains $1,254,500 to carry on the self-supporting program for certification of antibiotics, coal-tar colors, insulin, and the establishment of tolerances for pesticides, all of which are financed from fees collected, deposited in the Treasury and appropriated for expenditure by the Congress.

Our most important task is to protect consumers against harmful, insanitary, and falsely labeled foods, drugs, cosmetics, therapeutic devices, and the like. The protection afforded by the law does not, however, extend only to the ultimate consumer. It assures those who use or deal in foods, drugs, and cosmetics that these products are safe, and lessens unfair competition by making it possible for the manufacturer and dealer to have protection against unfair competition.

The basic philosophy of the Food and Drug Administration is to use every proper procedure through information and other means to prevent violations of the law. The great majority of food, drug, and cosmetic manufacturers have a keen sense of their responsibility and subscribe to the philosophy that what is good for the consumer is good for business. Therefore the Food and Drug Administration can largely focus its regulatory attention on the fringe groups that are either careless or culpable. When significant and substantial violations of the law are uncovered, it is the policy of the Food and Drug Administration to pursue their prosecution vigorously.

The 20th century has seen great changes in the food and drug industries. In addition the public who are more knowledgeable in their merchandising selections, demand a wider variety of foods and in a form that simplifies their preparation for the table.

The technologic developments of the last decade, the growth in our population, the large increase in the number of food items, the discovery of many new and potent drugs have multiplied the task of the FDA many fold.

Some of the statistics which demonstrate the increased responsibilities of the FDA are these:

(*1*) *Population*

One of the basic yardsticks for measuring the potential of food production is population. The population exceeds 172 million and is increasing at the rate of 1 every 11 seconds, and the proportion of urban population continues to grow. To safeguard the production and interstate distribution of foods and drugs in fiscal year 1959 will cost each man, woman and child in the United States for services of the FDA approximately 6 cents, a sum hardly identifiable in the per capita expenditures of the Federal budget.

(*2*) *Food*

We are in an era of unprecedented production, consumption and diversification of products. Twenty-five percent of every disposable dollar goes for food. United States per capita consumption of food edged up from $424 in 1956 to $440 in 1957, and is expected to reach $488 in 1958. It seems probable that the per capita consumption in 1959 will be around $500. Food production in 1956 totaled $71 billion; in 1957, $75 billion; in 1958 an estimated $79 billion. This in comparison to $16 billion in 1939. Likewise the shift from the corner grocery store to the supermarket has quintupled the number of food products available to the consumer. Foods contain a multiplicity of ingredients unheard of 20 years ago.

Increased interest in product innovation and technological developments have led to significant changes in the food manufacturing industries. The average output per plant has increased, and the swing toward convenience foods has grown rapidly. And this is only the beginning. Food manufacturing companies are spending more and more on research and product development. It is reasonable to predict that in the future, there will not only be many new convenience products, but a vast improvement of the old ones.

(*3*) *Drugs*

Few industries have progressed more rapidly than the pharmaceutical drug industry which has more than doubled its business since World War II. Sales in 1957 reached a record high of close to $2 billion. A steady stream of new and wonderful drugs designed to conquer, relieve, or prevent many ailments has played an important part in increased life expectancy in the United States 9 years in the last 2 decades. Antibiotics, hormones, and tranquilizers have become commonly accepted. Tranquilizers alone topped $150 million in sales in 1957. In fact, some

70 percent of all prescriptions today are for drugs discovered in the past 10 years. An executive of one of the United States largest drug producing laboratories is reported to have said "In the old days you used to predict a new drug every 25 years. Now we get a new one practically every 25 minutes."

In order to keep pace with all of these developments in the industries subject to the law and properly discharge our increased responsibilities under the Food, Drug, and Cosmetic Act which our second half century of progress has thrust upon us, the Food and Drug Administration cannot be static. It must build its resources in terms of people and facilities to meet this challenge on behalf of its clients, the consumer, and the industry.

There are many fields in which the public interest requires both continued and increased activity by the Food and Drug Administration.

Scientific research toward the development of more and better analytical methods, particularly those for detecting and measuring residues of pesticide chemicals and food additives and evaluating their toxicity must be given increasing attention.

There is a need for accelerating research to develop more and better analytical procedures for detecting and measuring residues of chemical food additives including pesticide chemicals.

Chemicals are being used in food in increasing number to meet the demands of modern technology and to provide convenience foodstuffs which the housewife wishes today.

It is important to be sure that they are safe. Some of the questions that need to be answered to determine their safety are:

1. What is the exact nature of the chemical to be added to food?
2. Is there any chance it will be changed into a more toxic material when the food is cooked or otherwise processed?
3. What effect does it have on man when he eats small amounts over a lifetime?
4. How much of the chemical is the average man apt to get in his food?
5. Is there any danger that people on special diets will get extra amounts of the chemical and thus be harmed?
6. Do we have a good, reliable laboratory method for detecting the chemical in food and determining whether too much was added in the factory?

In some cases we do not have this information. Chemicals of unknown or indeterminate composition are being added to food in large quantity, and with the resources now available to the FDA, we are unable to determine promptly whether the practice is safe or hazardous. In many cases the basic analytical procedures for detecting these substances once they have been incorporated in food have not been developed. We will have to develop them.

Without considering the new chemicals that will be added to food in the future (which we hope will be controlled by legislation our Department has proposed), we have a monumental task just to deal with the substances that are being put in food now.

A part of the chemical additives problem stems from use of poisonous pesticides—insecticides, fungicides, etc.—on crops. This has been brought under better control than most other additives by the pesticide chemicals amendment enacted in 1954.

Under this amendment, the person who promotes the use of a pesticide chemical is required to submit data that will permit us to determine what residue may remain safely on food. Even with the extensive advance work that is done under this amendment by industry, we are faced with the overwhelming job of determining that the safe residue levels on food are not exceeded.

Every year the United States produces approximately:

700,000 car (rail and truck) lots of fruits and vegetables
195 million boxes citrus fruits
6 billion dozen eggs
1 million carloads grain (wheat, corn, etc.)
100 million tons of hay which may contain poisons that would carry into milk

And large quantities of lesser crops.

Much of this tremendous output of food moves from one State to another and thus it becomes a Federal obligation to see that it is safe and wholesome. Over 150 pesticide chemicals are used in one way or another on farm crops. About 1,500 separate tolerances have been established to show what levels of these chemicals may safely remain on crops as they are shipped. There are hundreds of other possible pesticide uses that would leave residues that are not legal and

thus would render the treated crops illegal under the Federal law. Unsafe amounts of poisonous agricultural sprays may result from applying pesticides:

1. To the wrong crop.
2. In too heavy a dose.
3. Too close to harvest.

Recently, for example, we found in one area that some growers applied a pesticide too close to harvesting of spinach and they got residues up to 10 times higher than the safe tolerance level. As a result, we found it necessary to seize 16 carloads of spinach. Occasionally, a crop has residues of a poison that is not allowed on food in any quantity and we have to take action to see that it does not reach the consumer.

This problem is being attacked consistent with the staff we have available. A like level of attention is given to chemical poisons added to processed foods. There are many chemicals used in food that we are not able to test because we do not have suitable laboratory methods.

FDA scientists are seeking better methods for detecting contamination and spoilage of foods. Precooked and prepackaged foods, fresh and frozen poultry, and fruits and vegetables will receive high priorities in this program.

Of the wide variety of frozen foods prepared for the market, the FDA must restrict initial investigations to those foods offering the greatest potential hazard to the consumer. Some frozen precooked foods may become ideal culture mediums unless they are properly handled. Typical examples of this type of precooked product which offers a warm, moist, nutrient medium for bacterial growth at certain stages in the plant production if appropriate precautions are not observed are: chicken a la king, chop suey, and certain fish and shellfish items such as lobster Newburg, crab cakes, deviled clams, etc.

Moreover some of these "heat-and-serve" products contain deep-fat fried materials such as fried shrimp, french-fried potatoes, etc.

It has been known that prolonged heating of certain fats and oils result in some chemical change, and there have been reports in the scientific literature that such changes may be accompanied by the production of toxic substances, or may involve changes in the nutritive values of the oils. Since the fats and oils used in industry in the manufacture of the deep-fat-fried foods are used over and over again, such changes may have public health significance. Because of these developments, FDA has instituted a project to develop further information concerning the effect of prolonged heating on food fats and oils.

Continuing problems in the production and distribution of food are always with us. Recently a State health department called our attention to a serious illness attributed to the consumption of olive oil contaminated with camphorated oil. Upon inspection we discovered that the distributor had been packing camphorated oil and olive oil in the same equipment. We are seizing lots of the contaminated oil and the manufacturer is recalling all stocks packed since January.

When a housewife noticed her child excreting blood, she found that chili powder used contained slivers of glass. Upon investigation at the manufacturing plant, and sampling of several shipments made by the firm, we found sizable particles of glass in a number of lots. The company recalled stocks and a press and radio warning was issued.

We have been accelerating our work in the field of new drugs. At present, we have a wealth of information contained in some 11,000 new drug applications. In keeping with the rapid developments in the drug industry our medical and scientific staff conducts several hundred personal meetings a year with members of the industry. In addition, endless hours of working time are consumed by many telephone conferences a year. To demonstrate how fast this industry is progressing, one of the large drug firms has recently spent $4 million on a building for veterinary and related agricultural research alone. This company had 25,000 compounds on their shelves which had been developed, and will be screened for their potential agricultural uses. Further, they develop at least 2,000 new compounds a year.

On September 18, 1957, a large company issued a general mailing to physicians of a bulletin and leaflet offering an "antiseptic" for the prevention and treatment of Asian flu. This antiseptic is a new drug which has not been shown to be either safe or of value for this proposed use. Such use of the drug was not covered by an effective new drug application as required by law. On September 23, 1957, Food and Drug inspectors initiated investigations at headquarters of the distributor and the manufacturing establishment. As a result of these investigations this "antiseptic" promotion for use in Asian flu which also included the placing of inspired newspaper stories was promptly discontinued by the firm. Other

steps taken to deal with opportunistic promotions of worthless drugs to prevent or treat Asian flu include the recent seizure of a mouth wash, and a public warning against such misrepresentations.

Moreover, FDA recently stopped the proposed commercial distribution of a worthless and possibly dangerous drug offered as a treatment for cancer. The producer was given the opportunity to appear at an administrative hearing to show why his application for the drug should not be refused. Our time-consuming investigation of hundreds of clinical cases cited in the application established that the results obtained with the drug were extensively falsified in the application. The firm withdrew the application in preference to being confronted with the evidence of misrepresentation at a hearing. The practical effect of this was to protect the public from one of the most vicious types of fraud.

Several months ago a firm was engaged in an extensive promotion to physicians of a new drug for administration to children to promote weight gain. This drug contains among other ingredients, reserpine, one of the new tranquilizers. A new drug application was effective for its use on prescription solely in hyper-irritable, emotionally disturbed children, whose poor eating habits and under-nourishment resulted from their abnormal condition. The broader recommendation for use of the drug in normal children was not provided for in the application and had not been established as safe. The firm was given the opportunity of an administrative hearing upon the basis of which their application might be suspended and all sales stopped. They preferred to correct their labeling and promotional practices to conform to the conditions of the application. The correction included mailing to lists of more than 55,000 physicians a letter of correction and the official brochure which contained the limited indications for use and appropriate warnings as to the dangers of reserpine.

We want to learn more about the new cosmetics and the new ingredients that go into them. Recently, investigations in this area have been confined largely to those reported to have caused irritations or other injuries to users. While we occasionally do find a cosmetic that has been harmful, we can assure the ladies that cosmetics in general are quite safe.

Our program for 1958 includes more attention to food standards. This area has received a small part of Food and Drug Administration time in recent years. Consumers, as well as food manufacturers, want standards for additional foods and more enforcement of standards. This will protect consumers and prevent unfair competition.

Another need for better pocketbook protection is in the area of deliberate fraud. Last year we seized cocoa adulterated with ground cocoa shells and cottonseed flour, olive oil labeled as pure but containing a substantial portion of cottonseed oil, and other grossly misbranded items. We plan to continue our efforts to curtail such practices.

One of the basic needs in preventative law enforcement is to fully inform producers, consumers, and professional people who use the products regulated by the Food, Drug, and Cosmetic Act, of the provisions and requirements of the law.

Among the producers hardest to reach, but whose understanding of the law is essential to the improvement of our foods, is the farmer. He must be more fully informed of the proper use of insecticides on the crops he grows. Likewise, the ultimate success of our clean grain and milk programs depends on how well the farmer understands the need for and follows sanitary procedures.

The consumer must learn to evaluate statements of quacks, pitchmen, house-to-house canvassers, and other promoters who prey on ignorance in medical and nutritional fields. He needs to know how far the law protects him and wherein he must protect himself. We believe that a fully informed public, will be better able to understand the purposes and objectives of the Food and Drug Administration programs and secure greater benefits which accrue from an effective enforcement of the law.

The foregoing are some of the problems which must be solved if the public interest is to be adequately served under the law. This requires trained personnel, and at salary levels commensurate with the high degree of responsibility for protecting the public health. The personnel must have the necessary up-to-date facilities to perform their tasks efficiently.

The appropriation of $9,300,000 for fiscal year 1959, approved by the House of Representatives in H. R. 11645 will allow funds to—

(1) Finance in 1959 the full staff and auxiliary expenses authorized in fiscal year 1958;

(2) Staff and place in operation the new district office in Detroit, Mich., authorized to be equipped in fiscal year 1958;

(3) Continue the replacement, modernization, and improvement of equipment and facilities.

The $110,000 for civil defense activities deleted by the House of Representatives is not being requested for inclusion in this appropriation. It is our understanding that the Administrator of Civil Defense will request the Independent Offices Subcommittee to include funds in the Federal civil defense appropriation for allocation to the agencies to whom certain civil defense functions have been delegated.

In accordance with the request contained in the 1959 budget, the House of Representatives has approved deletion of section 210 of the general provisions which prohibited the Department of Health, Education, and Welfare from participating in the planning of a new headquarters laboratory and office building, for the Food and Drug Administration.

Salaries and Expenses

Summary of changes

		Positions	Amount
1958 actual appropriation		1,180	$9,300,000
1958 supplemental appropriation			
Total appropriation		1,180	9,300,000
Deduct nonrecurring items:			
Purchase of 89 automobiles, 51 of which are replacements, net in fiscal year 1958	$128,400		
Equipment replacement and modernization of facilities and for new staff in fiscal year 1958	694,675		
Preparation of Detroit district headquarters in fiscal year 1958	260,000		
			−1,083,075
Revised 1958 base		1,180	8,216,925
1959 appropriation request		1,229	9,410,000
Net change requested		+49	1,193,075

	1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount
Increases:				
For mandatory items:				
Retirement contributions annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)		$29,500		$29,500
Annualization costs for additional positions authorized in 1958		220,000		220,000
Subtotal		249,500		249,500
For program items:				
Accelerated field inspectional travel		18,000		18,000
Replacement of 25 automobiles, net		35,000		35,000
Equipment replacement and modernization of facilities		457,575		457,575
Detroit district requirements for initial staff, retirement contributions, and all other auxiliary expenses	37	323,000	37	323,000
Delegated civil defense functions for initial staff, retirement contributions, and all other auxiliary expenses	12	110,000		
Total change requested	49	1,193,075	37	1,083,075

EFFECT OF HOUSE ACTION

The allowance of $9,300,000 included in H. R. 11645 is $110,000 below the budget estimate of $9,410,000.

The $110,000 deleted is for civil defense activities which we understand is being requested in the Independent Offices Subcommittee for inclusion in the Federal civil defense appropriation for allocation to the agencies to whom certain civil defense functions have been delegated.

SALARIES AND EXPENSES, CERTIFICATION, INSPECTION, AND OTHER SERVICES

Summary of changes

	Positions	Amount
1958 estimated appropriation	159	$1,254,500
Less increase in reserve		30,304
1958 obligational authority	159	1,224,196
Deduct nonrecurring items: Anticipated refunds		−1,700
Revised 1958 base	159	1,222,496
1959 appropriation request	159	1,254,500
Net change requested		+32,004

	1959 budget estimate		1959 House allowance	
	Position	Amount	Position	Amount
Increases:				
For mandatory items: Retirement contributions annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)		$1,700		$1,700
For program items: Acceleration of travel, other contractual services, and purchase of equipment for the certification services activity		30,304		30,304
Total change requested		32,004		32,004

AGENCY FUNCTION

Mr. LARRICK. The most important task of the Food and Drug Administration is the protection of consumers against harmful, insanitary, and falsely labeled foods, drugs, cosmetics, therapeutic devices, and related products which move in interstate commerce. The Food and Drug Administration is also responsible for certifying the safety and purity of coal-tar colors, and the safety, purity and efficacy of certain antibiotic drugs and insulin. We establish safe tolerances for poisonous pesticides under a relatively recent amendment to the statute.

The Food and Drug Administration uses every proper procedure through information and other means to prevent violations of the law. But when violations do occur, we pursue their prosecution vigorously.

FACTORS INFLUENCING OPERATION

There are four important factors which have a significant influence upon the operations of the Food and Drug Administration:

First, our mushrooming population: It has risen from 165 million in fiscal year 1956 when the expansion program was initiated, to 172 million now, and is increasing at the rate of 1 person every 11 seconds.

Second, food production and consumption: In 1939 food production totaled $16 billion; in 1956, $71 billion; and this year an estimated $79 billion. Per capita consumption of food rose from $424 in 1956 to an estimated per capita of $488, and $500 in fiscal years 1958 and 1959, respectively.

Third, a large increase in the production of new drugs to conquer, relieve, or prevent many ailments, thus increasing life extectancy,

has caused sales in the pharmaceutical drug industry to reach a record high of close to $2 billion in 1957.

Senator HILL. State that figure again.

Mr. LARRICK. $2 billion in 1957 in the drug industry alone.

Fourth, the development of many new products in both the food and drug fields are leading to significant changes in the food and drug industries, which are spending more and more on research.

To keep abreast of these developments and properly discharge the increased responsibilities which our second half century of progress has thrust upon us, we are building our resources in terms of people and facilities, to meet this challenge to protect human resources—an invaluable asset for peace or for defense.

DANGEROUS INGREDIENTS IN FOOD

There are many fields in which the public interest requires both continued and increased activity by the Food and Drug Administration. Typical are problems which result from chemicals in food and drugs, including pesticide chemicals used so extensively today in agriculture.

The variety of pesticide chemicals used today keep our scientific and inspectional staff in a continuous state of alert, even though much better control has been achieved through the enactment of the Pesticide Chemicals Amendment in 1954. In December 1957, for example, we seized 16 carloads of spinach that had gone practically across the country, which had been sprayed at market time and shipped containing DDT that was far above the approved tolerances, and, therefore, dangerous.

Senator HILL. Where was that spinach shipped from?

Mr. LARRICK. That spinach came from Texas.

I will say that most of the Texas growers are careful and do not ship out bad products.

Despite the extensive work performed by the industry under this law, we are faced with the tremendous job of determining that the pesticides are used as the label directs and that safe residue levels are not exceeded.

Within the past few months the Food and Drug Administration acted in securing removal from the market of a food product which was found to contain particles of glass. Consumers were warned through press and radio that use of the product may cause internal injuries. Several large shipments were seized and the manufacturer cooperated in recalling the product which has a nationwide distribution.

SAFETY OF DRUGS

The safety of drugs is an area which demands much time and effort from our medical and scientific personnel. The evaluation and approval of new drug applications is one of the most important responsibilities of the Food and Drug Administration. This requires both a high degree of professional competency and sufficient personnel to keep pace with the medical and pharmaceutical progress in the drug field. Certainly no one wants a dangerous drug to be released for sale.

Among the recent actions against seriously misrepresented medicine was one stopping the marketing of an antispetic promoted for use in

Asian flu, and the seizure of a mouthwash which purported to treat this ailment. We also stopped the proposed commercial distribution of a worthless and possibly dangerous drug offered as a treatment for cancer.

These are but highlights of some of our activities. Normal operations also involve inspection and seizure of thousands of tons of unfit food, and the scientific laboratory work in the development of methods of analysis and other activities which underpin all of our work.

OPERATION UNDER HOUSE ALLOWANCE

To enable the Food and Drug Administration to do its job effectively, we have been devoting considerable time and attention to program planning and an improvement in the internal affairs of the organization. These improvements are calculated to provide for more efficient operations and to establish an expansible framework for the more ready absorption of an expanded organization.

The appropriation of $9,300,000 for fiscal year 1959, approved by the House of Representatives in H. R. 11645, will allow the Food and Drug Administration funds to:

1. Finance the personnel authorized in fiscal year 1958;
2. Begin staffing and place in operation the new district office in Detroit, authorized in fiscal year 1958;
3. Continue replacement, modernization, and improvement of equipment and facilities.

The 1959 budget estimate of $9,410,000 included $110,000 for civil defense activities which was disallowed by the House of Representatives. We are not requesting this item to be restored to this appropriation since it is our understanding that the Administrator of Civil Defense will request the Independent Offices Subcommittee to include funds in the Federal civil defense appropriation for allocation to the agencies to whom certain civil defense functions have been delegated.

Since the 1959 appropriation bill for the independent offices—H. R. 11574—provides appropriations to continue developing plans and specifications for all approved projects, it is likely that we shall be able to resume and complete planning for the Food and Drug Administration Laboratory building in Washington after July 1, 1958.

In conclusion, Mr. Chairman and members of the committee, I should like to express our gratitude to the committee for its consideration of the problems involved in administering the Food and Drug Act.

Senator HILL. The House allowed the full budget estimate except this $110,000 to which you have just referred, which you are not asking to be restored because of your understanding of the reason for the House eliminating that item.

Mr. LARRICK. That is right, sir.

REQUEST FOR DALLAS OFFICE

Senator HILL. You spoke of the spinach shipped from Texas. Did you not contemplate a district office at Dallas, Tex.?

Mr. LARRICK. That was not allowed, Senator.

Senator HILL. Have you recommended that?

Mr. LARRICK. Yes, we recommended it.

Senator HILL. This was in your budget request.

Mr. LARRICK. Yes.

Senator HILL. For this year?

Mr. LARRICK. Yes.

Senator HILL. How much did that involve?

Mr. LARRICK. $300,000.

Senator HILL. I believe the functions that would be carried on by that office would have to be carried on by the New Orleans office. Is that right?

Mr. LARRICK. That is right.

Senator HILL. There is quite a distance there, of course, from Texas. When you move from New Orleans to Texas, then where is your next district office?

Mr. LARRICK. Denver, Colo.; and then Los Angeles.

Senator HILL. How many times have you requested funds for this Dallas office?

Mr. LARRICK. Twice.

Senator HILL. And both times the Budget Bureau has denied it?

Mr. LARRICK. That's right.

Senator HILL. Of course, you are familiar with the report of the Citizens Committee, which was appointed here several years ago.

Mr. LARRICK. I am, and we have a member of the Citizens Committee in the audience today.

Senator HILL. Mr. Dunn.

The Committee recommended a threefold to fourfold expansion of your administration. Isn't that true? In a period of from 5 to 10 years?

Mr. LARRICK. Yes.

Senator HILL. What has been done to carry out these recommendations?

Mr. LARRICK. In the 2 past years there has been a great deal of progress made. There has been an increase in our staffing pattern which would have meant this threefold to fourfold increase in a 10-year period.

There was one new laboratory authorized in Detroit, but this year that program of implementing the Citizens Advisory Committee has been deferred by the Budget Bureau.

Senator HILL. In other words, with reference to funds as recommended by the Budget Bureau, when you say, "this year," you are speaking of the coming fiscal year?

Mr. LARRICK. The fiscal year that we are trying to get money for now.

Senator HILL. Fiscal 1959. In other words, with the funds recommended by the Budget Bureau and allowed by the House, the recommendation for the expansion would not be carried out so far as next year is concerned? You would just remain in status quo?

Mr. LARRICK. We would be allowed, I believe, a 3 percent increase.

Mr. COHEN. Three percent, which would be to initially staff the office in Detroit that the Congress authorized this year.

Mr. LARRICK. And they would allow us some money to replace some obsolete laboratory equipment.

FUNDS NEEDED TO IMPLEMENT RECOMMENDATIONS

Senator HILL. How much additional money would be necessary if you went ahead with the recommendation of the Committee for 1959?

Mr. COHEN. Approximately $1 million, Senator.

Senator HILL. You might give us, for the record, a breakdown of just what that $1 million would be for, what this expansion would be for; how much for personnel and how much for laboratory.

Mr. LARRICK. I would like to be able to adjust that figure. I don't believe $1 million would do it.

Senator HILL. Then I wish you would figure out how much you would need. In other words, the Committee recommended this expansion to take place over a period from 5 to 10 years. You advise us that there are no funds in the budget for this coming fiscal year for any of this expansion.

What I would like to know and what we would like to have in the record is how much it would cost and what the expansion would be if you followed through on the recommendations of the Committee.

Mr. KELLY. Mr. Chairman, for the current year the Congress authorized a 15-percent expansion in staff, which was designed in a period of about 8½ years to carry out the Citizens Advisory Committee recommendation of a threefold expansion in 5 to 10 years.

The Secretary again recommended a 15-percent increase in staffing for 1959, but, because of the overall budgetary considerations, it was not allowed.

Therefore, it would take $1,500,000 to carry out that recommendation for another year, which is the additional amount recommended to the Bureau of the Budget by the Secretary exclusive of the civil defense program.

Senator HILL. I notice the request, as approved by the Secretary, was $10,980,000. The budget allowed $9,410,000. In other words, there is that difference then of $1,570,000 that it would have required if you had gone forward with this expansion which you had determined would be for a period of 8½ years: is that right?

Mr. LARRICK. That is right. The Secretary has since testified to that in the House.

Senator HILL. You might furnish us, for the record, a detailed breakdown of just what this expansion would be for this next fiscal year if you had carried out the recommendation of the committee and had gone forward with the expansion and if you had this $1,570,000.

Mr. LARRICK. Thank you very much, sir. We will be happy to do that.

(The information referred to follows:)

FOOD AND DRUG ADMINISTRATION

This information is being supplied in accordance with a request from Senator Hill, chairman of the Subcommittee on Appropriations, Department of Health, Education, and Welfare.

A budget estimate for fiscal year 1959 in the amount of $10,800,000 was recommended to the Bureau of the Budget to accomplish the third step in the expansion program recommended by the Citizens Advisory Committee for the Food and Drug Administration. The estimate approved by the Bureau of the Budget and allowed by the House of Representatives is $9,300,000, the same amount appropriated in the present fiscal year (1958). Availability of the $1,500,000 difference

between the original estimate and the allowance ($10,800,000 to $9,300,000) would allow for the additions indicated in the following presentation:

I. Personnel

	Washington	Field	Total
Technical staff	20	1	21
Scientific staff	26	18	44
Inspectional staff		34	34
Laboratory aids	6		6
Clerical staff	16	18	34
Total	68	71	139

II. Funds

(*a*) Personal services including retirement contributions cost	$717, 100
(*b*) Travel, transportation, and communication costs	74, 200
(*c*) Supplies and other services	55, 400
(*d*) Printing and reproduction for the expanding information program	50, 500
(*e*) Equipment for additional staff, replacement, modernization and renovation of laboratory facilities, and automobiles for inspectors	301, 200
(*f*) To equip new district in Dallas, Tex	300, 000
(*g*) Miscellaneous items	1, 600
Total	1, 500, 000

WASHINGTON

Six new positions (3 technical; 3 clerical) will be assigned to the development of educational materials in the stepped-up information program to encourage voluntary compliance and better consumer education as well as more liaison with State food and drug officials so that by joint efforts on problems of mutual interest we will be able to better coordinate our work for consumer protection.

Thirty new positions (25 scientific; 5 laboratory aids) are proposed for the Bureau of Biological and Physical Sciences on expanding programs relating to research and methodology in (*a*) cosmetics; (*b*) foods, involving the chemistry of pesticides and other food additives, chemical decomposition, food standards; (*c*) microbiology covering foodborne infections, food sanitation, and decomposition; (*d*) nutrition, particularly in the development of improved methods of assay, vitamin interrelationships, and studies of changes in fats and oils; (*e*) pharmaceutical chemistry dealing with review and analysis of drugs, development of methods of analyzing mixed feeds, and measuring residues of medicaments in edible tissues of animals; (*f*) pharmacology programs involving research on insecticides, additives, hormones, transquillizing medicines, enzymes, and cancer-producing potential of macromolecular chemicals, which are large molecules not readily absorbed in the body resulting in tumor formations.

Eight new positions (6 technical; 2 clerical) in the Bureau of Enforcement for the preparation of correspondence with the regulated industries and increasing the review and regulatory activities including the collection of evidence and data for citation, seizure, and prosecution which are expected from a larger field staff and expanded coverage.

Fourteen new positions (9 medical; 1 lab aid; 4 clerical) in the Bureau of Medicine to (*a*) reduce backlog of new drug applications; (*b*) give increased attention to clinical experience with new drugs; (*c*) determine compliance with provision of new drug applications; (*d*) increase medical support in trial of court cases involving misbranded drugs and devices.

Two new positions (1 technical; 1 clerical) in the Bureau of Program Planning and Appraisal to expand the collection of statistical data and secure needed information on appraisal of programs as they are carried out.

Two new positions (1 technical; 1 scientific) in the Bureau of Field Administration to keep pace with the increase in workload and responsibilities involved in managing a larger field staff.

Six new clerical positions in the Division of Administrative Management responsible for the administrative services to the growing staff in the operating bureaus and divisions.

FIELD

Thirty-three of the 71 positions indicated for the field would be assigned to the Detroit district office which would bring the total for that office up to 70 when added to the 37 positions allowed in the budget estimate. This would be almost a full complement of staff for the new Detroit district. The balance of the positions for the field (38) would be distributed to other district offices.

Programwise the 71 inspectional, scientific, and other field positions will be assigned to projects which require increased attention because of previous staff shortages and new developments in the food and drug industries. These are:

	Chemist	Inspection	Total
Pesticides	3	2	5
Wheat and grain	2	2	4
Frauds and cheats	2	2	4
Food standards	1	1	2
General drug	5	6	11
Investigation of the illegal sale of dangerous drugs	0	5	5
Chemical additives to foods	0	1	1
Food sanitation	1	4	5
Imports	1	1	2
Nutritional quackery	1	3	4
Radioactivity of foods	0	2	2
Cosmetics	0	3	3
Medicated feeds	2	2	4
Total	18	34	52
Administrative and clerical			19
Total			71

This contemplates a broader coverage by the inspectional staff, and a corresponding increase in analytical operations by the laboratories.

Senator HILL. Senator Hayden.

Senator HAYDEN. No questions.

Senator HILL. Senator Smith.

QUESTIONS OF SENATOR SMITH

Senator SMITH. Mr. Chairman, I would ask unanimous consent to give some questions to the chairman or to the clerk of the committee to be answered sometime during the week before the hearings end. I have some on my desk that I didn't bring with me, and I would rather have them in order.

Senator HILL. All right; fine. We will be very happy to have you do that.

We will give them to you, Commissioner Larrick, and you can answer them for the record. They will go in the record following Mr. Larrick's testimony.

Mr. LARRICK. We appreciate very much the Senator's interest.

Senator SMITH. Thank you.

(The information referred to follows:)

Question No. 1. What is being done about the poisons in our foods?

Answer. For a great many years, FDA has had an active program designed to detect instances in which foodstuffs become contaminated with poisonous materials and to remove such contaminated food from the market. In fiscal year 1957, for example, we made 32 seizures to remove from the market foods contaminated with chemicals. These included wheat containing mercurial compounds or lead pigments, celery containing Parathion, spinach containing DDT, imitation vanilla containing coumarin, shelled pecans dyed with uncertified coal-tar colors, and ice cream cones containing boric acid.

Large quantities of coffee were detained at ports because they became contaminated at sea with ore concentrates or poisonous insecticides.

Prosecutions were filed in fiscal year 1957 against 3 warehouses and their responsible officers because of the reckless use of poisonous rodenticides which contaminated about 5,000 tons of stored beans.

In the first three quarters of fiscal year 1958, we have made 37 seizures of food contaminated with poisons.

Question No. 2. Will you please tell the committee of the special problems with dangerous drugs like amphetamine and barbiturates.

Answer. Barbiturates, amphetamines, and related drugs are very valuable therapeutic agents when properly used. They nevertheless constitute a special problem because, of all the dangerous drugs, they are in greatest demand for nonmedical purposes; and their abuse is not only harmful to the individual but results in social evils and danger to the public generally. While these two classes of drugs differ markedly in their physiologic effects, they are alike in that abuse or overuse may result in habituation or addiction. Overuse of barbiturates results in a form of intoxication, and prolonged abuse leads to physical and moral degeneration, broken homes, and offenses against society—too often terminating in suicide or accidental death. The euphoric or mood-elevating effect of amphetamines tends to produce a feeling of invincibility and leads habitual users to commit offenses such as crimes of violence while exhilarated. Both classes of drugs are often associated with juvenile delinquency.

Enforcement of the law which restricts these drugs to prescription sale has resulted in a considerable bootleg traffic in them. They are increasingly appearing in bars, truck stops, and other outlets wholly outside the legitimate channels of distribution of prescription drugs. Here our problem is complicated by the necessity of showing interstate movement of the drugs to establish jurisdiction.

Question No. 3. What is the nature and degree of danger from pesticides?

Answer. If too much pesticide residue is present on a food, the food is unsafe. We think better control of the problem is made possible by the pesticide chemicals amendment to the Federal Food, Drug, and Cosmetic Act (Public Law 518, 83d Cong.). Under this amendment we have determined and stated by regulation the safe limits (permitted tolerances) for many pesticide residues on many crops. This makes it easier for agricultural authorities to determine what spray practices will be safe on the farm.

The Food and Drug Administration, the United States Department of Agriculture, the National Agricultural Chemicals Association, and a great many of the States have joined in an intensive educational program which cautions the grower to use pesticides only as directed on the label, that is:

1. In the quantity specified;
2. On the crop specified; and
3. At the time specified.

As a result, there have been no reported poisonings from food contaminated with excessive pesticide residues.

This is not to say that the problem is completely contained. The report of seizure actions made, in answer to question No. 1, indicates that there is a very real problem, and we find that, with our limited force of inspectors and chemists, we are not able to give the inspection or analytical coverage needed to make sure that foods shipped in interstate commerce are generally free of excessive pesticide residues. This is one of our most active programs and, as additional manpower becomes available, additional time will be spent on it.

Question No. 4. What is the situation with respect to antibiotics?

Answer. By 1943 it had been demonstrated conclusively that penicillin was the most important drug ever developed for curing a large variety of serious and heretofore often fatal infectious diseases suffered at one or more times by all people. It had been shown, too, that, without the most careful and rigid manufacturing controls—it is produced by the growth of a living mold—and the most exact laboratory testing procedure, it could be a killer. For these reasons, when penicillin became available for use by physicians in treating the civilian population in 1945—heretofore all had gone to the Armed Forces, for whom the Food and Drug Administration tested each batch—it was agreed by the pencillin manufacturers, War Production Board, National Research Council, Food and Drug Administration, and the Congress that the general provisions of the Food, Drug, and Cosmetic Act were not adequate to safely control this lifesaving drug. It was agreed that there should be predistribution testing of each batch by the Government—as was and is done with insulin—before it was offered for sale. This special form of control became a fact when Congress passed section 507 of the Food, Drug, and Cosmetic Act. Seven antibiotics are now certified by the Food and Drug Administration under this section of the act through the amendment which was made in 1945 to require the certification of penicillin. The act was

again amended in 1947 to include streptomycin and dihydrostreptomycin (a derivative), and in 1949 to include bacitracin, chloramphenicol, and chlortetracycline (tetracycline, a derivative, is also a certified drug). Before approval under this section, a preparation containing any of these seven antibiotics must have been clinically demonstrated to be safe and efficacious in the diseases for which it is recommended. In addition, each batch produced must be tested and shown to comply with the standards of identity, strength, quality, and purity established under the regulations before shipment in interstate commerce. Furthermore, the certification program is self-sustaining, since the Congress required that manufacturers using this service pay fees on a batch basis to insure a satisfactory and efficient service. Since payment of fees is based on cost, any excess fees are returned to manufacturers.

In addition to the 7 certified antibiotics, there are 12 others available domestically for clinical use. These are new drugs, regulated under section 505 of the act. Fundamentally, in contrast to the certification section, only the safety of new drugs must be shown, not their efficacy. In addition, batch testing of new drugs is not required, nor are fees charged for approval of a new drug application. In spite of the fact that only 7 of the 19 commercially available antibiotics are certified, these 7 antibiotics and their preparations constitute approximately 90 percent of all production in the United States for human and veterinary use, amounting in 1957 to more than 2.5 million pounds. Only 29 pounds were produced in 1943, the first year antibiotics were commercially produced in the United States.

The certification service on antibiotics efficiently regulates 90 percent of the domestic production and accounts for some 30 to 40 percent of all prescription drugs written. Every batch used in the preparation of such prescriptions has been check tested or certified by the Government, and none moves in interstate commerce until a certificate issues. All companies, large and small, produce products of equal and competitive quality under the certification system. The total budget for this control is $750,000, all collected from industry through fees.

In addition to providing funds for 100 percent testing of certifiable antibiotics, the fees collected under section 507 also provide for nationwide investigations, where necessary, such as determination of the extent of side reactions to antibiotics, extent of the adulteration of milk and other foods with antibiotics, etc. From the knowledge gained in these investigations, the Department has been able to issue proper instructions for the labeling and use of these drugs, resulting in extreme benefit to physicians and the consuming public.

Question No. 5. What have you found to be the harmful effects, as well as the beneficial effects, of hormone drugs? And what problems has this imposed on your Administration?

Answer. Hormones are substances which are secreted internally by certain glands of the body, from which they are carried by the blood or lymph to other organs and tissues for the control of growth and activity. Hormones may be extracted from the organs which make them and, in certain instances, may be prepared as synthetic chemicals. In either case, they are then available as therapeutic agents for the treatment of various diseases which may be caused by deficiencies of specific hormones or for which high concentrations of certain hormones may be beneficial.

Hormone therapy constitutes an important phase of medical practice. Outstanding examples are the use of corticotropin (ACTH) from the anterior pituitary gland for the treatment of arthritis and certain other collagen diseases: oxytocin and vasopressin from the posterior lobe of the same gland for the treatment of obstetrical and circulatory conditions, respectively; thyroxin from the thyroid gland for thryroid deficiencies; insulin from the pancreas for the treatment of diabetes; epinephrine from the adrenal medulla for circulatory conditions and asthma; hydrocortisone from the adrenal cortex in adrenal cortical hypofunction (Addison's disease), collagen and skin diseases; and the sex hormones for the control of sexual deficiencies, gynecologic abnormalities, and certain forms of cancer.

Harmful effects of hormones are characterized by a metabolic imbalance as a result of overdosage. Insulin may cause shock and convulsions. Epinephrine may cause heart irregularities; pitocin abnormal contraction of the uterus with rupture; vasopressin constriction of the coronary arteries; hydrocortisone may result in masculinization of the female and abnormalities of mineral metabolism.

An important function of the Food and Drug Administration is the processing of new drug applications for new hormones and their derivatives as they become available for therapeutic use. In this procedure we must be assured that they will be safe when used according to directions. Each batch of insulin must be certified for identity, strength, quality, and purity. We are concerned that all

hormones on the market comply with their labeled potency in order that expected effects will result from their use and that overdosage will not be administered inadvertently. When hormones are added to cosmetics we must be assured that they are not in concentrations which will cause systemic effects. We also have the problem of supervision of their labeling and the prevention of misrepresentations in promotional literature so that they may be used only properly and in dosages known to be safe.

Question No. 6. What about food additives?

Answer. The present law (the Food, Drug, and Cosmetic Act of 1938) prohibits the addition of a poisonous or deleterious chemical to food unless its use is in accordance with a safety regulation issued by the Department. But the law has this serious loophole—it does not require a manufacturer or any other person to test a chemical before adding it to food to determine whether it is a poison. So the unscrupulous or reckless manufacturer is free to add chemicals to food so long as it is not known whether they are poisonous. When new substances are added to food without proper testing, the job of determining whether they are suitable falls generally upon the Food and Drug Administration. We do not have the facilities that would be required to test all of the new chemicals that are being considered for use in foods and if we did, this would not give adequate consumer protection because complete toxicity testing may take 2 years or longer; while the tests are underway, the chemical may be present in the food supply with impunity.

To remedy this situation, our Department drafted last year and submitted to the Congress corrective legislation that has been introduced as S. 1895 (and H. R. 6747). The Health and Science Subcommittee of the Interstate and Foreign Commerce Committee of the House has held hearings on H. R. 6747 and other bills intended to deal with the food additives problem and we are hopeful that adequate legislation will be enacted soon.

Part of the increased staff recommended by the Citizens Advisory Committee is to take care of very important chemical food additive problems.

Question No. 7. What is the real story on tranquilizers?

Answer. The term "tranquilizer" is a psychological term used somewhat loosely for a group of new drugs with varying pharmacological actions. As indicated by many experts who testified before the Subcommittee on Legal and Monetary Affairs, Government Operations Committee (chairman, John A. Blatnik), this group of drugs represents a major pharmacologic and therapeutic advance in the treatment of mental disease. Their use has reduced the average length of hospital stay, has increased the rate of discharge of patients, and has contributed significantly to the early rehabilitation of selected patients with emotional disorders.

In addition to their use for hospital patients, the tranquilizers have been widely employed by the medical profession for ambulatory patients with a preponderance of beneficial results. For example, the necessity of hospitalization and confinement is obviated for many individuals who can now be appropriately and adequately treated with one of these drugs, with or without supplementary psychotherapy on an outpatient basis. Whereas heretofore the physician confronted with patients with this kind of problem had to resort to simple sedation with one of the barbiturates, bromides, or other similar drugs, he now has available a variety of drugs which yield a much better therapeutic effect in most instances, without impairing the individual's daily activities as did the sedatives.

Of equal importance to the use of the tranquilizers in mental disease is their wide and valuable application to a host of other disease conditions. For example, some of the tranquilizers are highly effective in the treatment of hypertension, not only the emotional aspect of the disease, but by having a direct blood pressure lowering effect as well. Their benefits have also been widely recognized in certain forms of arthritis, ulcerative colitis, peptic ulcer and, in particular, pre- and post-operatively for the apprehensive surgical patients.

As with all potent drugs, their use carries certain liabilities in terms of side effects or overdosage effects. It is for this reason that they must be restricted to a prescription status and should only be dispensed under the careful supervision of a physician.

When properly used under good medical care, the tranquilizers are, in fact, a whole new group of valuable therapeutic agents in every way comparable to the advent of sulfonamides, the antibiotics, or the steroid hormones.

Question No. 8. How adequate is the poultry inspection program?

Answer. The poultry industry has expanded rapidly within the past decade and its output constitutes an important facet of our national food supply. Our facilities for inspection and analytical work have not kept pace with this industry

expansion and from this view, our inspection program has not been adequate, though by careful allocation of our manpower we have given attention to the more serious industry conditions involving decomposition and sanitation.

During fiscal year 1957 we expended 6.8 inspector man-years in this program, making 520 inspections, of which 20 percent were violative. During this same period, 24 seizures of poultry were made of which 5 were due to the presence of diethylstilbestrol (a chemical added to accelerate growth) in the edible portion of the bird, and 19 were due to hygienic violations, i. e., produced under insanitary conditions, contaminated with fecal material and decomposition. Seven violations during this period were referred to the courts for criminal prosecution and one injunction was referred to the Department of Justice.

During the past year we completed a Manual for Examination of Poultry and Poultry Products for Compliance With the Federal Food, Drug, and Cosmetic Act. This manual was the result of several years work to bring about uniformity of policy and practice by the several Federal agencies involved—United States Department of Agriculture, Department of Defense (Army, Navy, and Air Force), Public Health Service of the Department of Health, Education, and Welfare, and the Food and Drug Administration of the same Department. All of these Federal agencies cooperated in preparation of the manual and concurred in it and its distribution. In addition to these agencies, distribution has been made to State and local food and drug enforcement officials and public health officers.

The compulsory poultry inspection bill, passed by the Congress last fall, to be enforced by the United States Department of Agriculture, will result in more adequate protection of the consumer with regard to poultry and poultry products. Voluntary inspection may be had after May 1, 1958, by application to the United States Department of Agriculture. Compulsory inspection will become effective January 1, 1959. Representatives of the Food and Drug Administration testified in support of this bill.

Question No. 9. What is the status of the wheat inspection program?

Answer. Since the program was reactivated January 5, 1955, the program has had signal success. This success is due, in no small part, to the support and cooperation of other Federal and State agencies and the regulated industry itself.

Since January 5, 1955, the Food and Drug Administration has examined 10,198 rail car and truckload shipments of wheat. 2,817 samples have been collected for laboratory examination and 90 seizures of violative wheat have been made, most of which were disposed of on consent decrees of condemnation and forfeiture, with diversion of the wheat unfit for human food to animal feed channels or outlets. Additional lots of unfit wheat have been voluntarily removed from human food channels, acted upon by cooperating State and local food and drug enforcement officials, or, in some cases, referred to the United States Department of Agriculture for proper disposition, being the Government owner of the wheat involved.

The inspection program has two principal phases: (1) Objective examination of carlots and truckloads in market sites for contamination, and (2) inspection of country and terminal elevators. An important segment of phase (1) of the program is the continued discovery of wheat containing grain treated for seed use with mercurial compounds. During fiscal year 1957 it was necessary to seize 18 shipments due to this health-hazard violation. Inasmuch as the yearly wheat crop requires approximately 500,000 carlot, or the equivalent shipments to move it to market, it is apparent that the program is operating successfully.

The Food and Drug Administration, in cooperation with the United States Department of Agriculture, various trade associations, and the industry itself, is vigorously continuing and expanding its educational and informational program in an effort to encourage more voluntary compliance, more attention to basic sanitation, and more appreciation of the need for clean grain and cereal foods.

Question No. 10. What are your findings on the radioactive fallout effect on food?

Answer. Late in 1956, the Food and Drug Administration initiated a program to determine the level of "naturally occurring" radioactivity in a broad variety of foods from all parts of the United States. FDA appealed to consumers and canners for canned foods packed prior to 1945. Over 1,200 samples were collected and are being analyzed. The results of these analyses will give us the "base line" by which we can measure the increase in the radioactivity of currently produced foods.

Coincident with the above investigation, we collected samples of selected foods from current production. These samples are being analyzed. The difference between their radioactivity content and that of their pre-1945 counterparts will tell us the effect of radioactive fallout on these foods.

In April 1958, we initiated a broad program to monitor radioactivity in foods. We are checking not only on radioactivity in foods which may be contributed by fallout, but on the effect on crops of radioactive wastes from nuclear powerplants which may spill over into rivers and onto agricultural land. The program emphasizes the collection of samples of fruits and vegetables and thus will be an excellent index of the total radioactivity from all sources. In addition, the Food and Drug Administration has participated in the controlled experiments at the national test site in Nevada. These have involved exposure of a wide variety of foods in various package forms, as well as bulk, to fallout contamination. Recovered portions were examined for radioactive contamination, suitability for consumption, etc., and decontamination experiments were also conducted. The results of these tests are presently in process of preparation and classification determinations.

Question No. 11. For just what purpose does the Food and Drug Administration exist today?

Answer. The Food and Drug Administration exists today for exactly the same reason it was originally created, i. e., to safeguard the Nation's food, drug, therapeutic devices, and cosmetic supply. Whereas its reason for existence has remained constant for the past 50 years, the scope and extent of its responsibilities has expanded many fold due to technological and scientific progress in the regulated industries.

The Food and Drug Administration is the principal Federal agency to which consumers look for protection against harmful, insanitary, and falsely labeled foods, drugs, therapeutic devices, cosmetics, and related products in interstate commerce. This protection is afforded through enforcement of the Federal Food, Drug, and Cosmetic Act (Public Law 717, 75th Cong.) and four related statutes, the Tea Importation Act (Public Law 117, 60th Cong., and 29 Stat. 604, ch. 358, 54th Cong.), the Import Milk Act (Public Law 625, 69th Cong.), the Federal Caustic Poison Act (Public Law 783, 69th Cong.), and the Filled Milk Act (Public Law 513, 67th Cong.). This protection extends not only to domestically produced and distributed products but to those offered for importation into the United States. An equally important phase of consumer protection is afforded through certification by the Food and Drug Administration of the safety, efficacy, and purity of certain foods, drugs, and coal-tar colors.

The programs of the Food and Drug Administration represent a health security to the 171 million people in the United States, which is designed to guarantee the purity and safety of the vast quantities of products produced and consumed by the American public daily. Foods and drugs in this modern age are manufactured and distributed on a nationwide basis and include ingredients to permit them to withstand problems of transportation and storage.

The fact that our American food supply is the safest and most nutritious in the world, that our drugs are equally safe and effective when taken according to directions, and that our cosmetics are also safe to use, is no accident. The Food and Drug Administration, with the cooperation of State and local food and drug enforcement officials, and the regulated industries' support, guarantees that these conditions exist and will continue to the interest of the consumer's health and pocketbook.

Question No. 12. Is the charge true that your FDA duties have just about relegated itself to investigating sanitary conditions and trying to prosecute anyone who tries to expose the alleged chaotic condition to which our food has gradually sunk?

Answer. This charge is not true. A primary objective of the Food, Drug, and Cosmetic Act is to assure the consumer a safe, clean, wholesome food supply. Once violations involving hazards to health have been dealt with, our principal concern in the food field is to keep off the market filthy or decomposed foods, or foods produced under insanitary conditions. As a result of our enforcement activities this past year, some 12 million pounds of filthy and decomposed foods were seized and an additional 8 million pounds of such food were voluntarily destroyed or converted to nonfood use. Thus a total of about 20 million pounds of such food—some 50,000 pounds per day—have been taken off the market.

This past year we also investigated some 22 food-poisoning outbreaks. Insanitation still proves to be one of the major contributing factors. Fecal organisms present on ready-to-eat foods because of insanitary practices not only constitute filth very repugnant to the consumer, but represent a real health hazard to him.

We are devoting a substantial effort to this aspect of enforcement, with the result that America has the best food supply in the world today. We do not nor

would consumers generally share the view of the relative unimportance of this work suggested in the question.

Because of its impact on our national health, nutritional quackery is a matter of serious concern to the nutritionist, the physician, and the enforcement official. In the recent past we have prosecuted a number of health food distributors on charges of violation of the act, based on false and misleading claims for their products.

We are aware that our activities against nutritional quackery have led to an organized effort among people we have proceeded against and their followers to discredit the Food and Drug Administration.

Senator HILL. Is there anything else?

If not, Mr. Larrick and you gentlemen, we are certainly very much obliged to you.

Mr. Dunn is the president of the Food Law Institute. Do you wish to say a word at this time?

FOOD LAW INSTITUTE, NEW YORK, N. Y.

STATEMENT OF C. WESLEY DUNN, PRESIDENT

GENERAL STATEMENT

Mr. DUNN. I came down to Washington for the purpose of attending this hearing, Senator.

Senator HILL. We are happy to have you here, sir.

We ordinarily proceed with the Department witnesses, and then have the nondepartment witnesses afterward, but, if you have just a word you would like to say at this time since you are here, we would be glad to have you do so.

Will you give your full name and address.

Mr. DUNN. My name is Charles Wesley Dunn. I am from New York City, and I was a member of the Citizens Advisory Committee and perhaps took the leading part in making this recommendation for an increased appropriation for the FDA.

I am also president of the Food Law Institute, which is a public organization set up by the leading food manufacturers of this country to support our pure food laws.

I am chairman of the section on food and drug law of the American Bar Association, of the New York State Bar Association. And I am also general counsel for the major national association of food manufacturers in this country.

INCREASE IN APPROPRIATION RECOMMENDED

I would like to support the appropriation made by the House of approximately $9 million, but recommend that this subcommittee seriously consider increasing that appropriation to the amount recommended by the Citizens Advisory Committee, which would be roughly $1.5 million increase.

We in the food industry, Mr. Chairman, perhaps know better than anyone else how effective and important the administration of our national pure food law is to this country. It is the very foundation on which our food industry operates today, to prevent the adulteration of brands of food, and to see that our food supplies are healthy in all circumstances.

Therefore, I would like to say personally that, as a member of the Citizens Advisory Committee, I think that the urgency of public

health protection, which is a normal need under all circumstances in our country, would fully justify the committee in recommending the increase which the Food and Drug Administration actually needs. This Administration, I know from my own experience with it, has been impoverished for many years and has been unable to do what it should have done to protect the public health under this great pure food law, and I seriously hope this committee will consider this.

Senator HILL. You speak as one who represents the processors of food?

Mr. DUNN. Yes, sir; throughout the country; the leading food manufacturers.

Senator HILL. You represent the industry that the Food and Drug Administration regulates.

Mr. DUNN. Yes, sir.

Senator HILL. It is not always we find this situation.

Senator SMITH. Mr. Chairman, it is very refreshing.

Senator HILL. It is indeed.

Mr. DUNN. I am very happy to be here.

Senator HILL. We want to thank you for coming all the way down from New York this morning, and we certainly appreciate your statement. Thank you very much.

Mr. DUNN. Thank you.

COMMUNICATIONS

Senator HILL. I wish to place in the record at this point a few of the communications I have received in connection with the appropriations for the Food and Drug Administration.

These letters are from the people subject to the inspection activities of the Administration and it is refreshing to have these businesses urge additional funds to provide a better service.

(The letters referred to follow:)

AMERICAN PHARMACEUTICAL MANUFACTURERS' ASSOCIATION,
New York, N. Y., April 12, 1958.

Hon. LISTER HILL,
Chairman, Committee on Labor and Public Welfare,
United States Senate, Washington, D. C.

DEAR SIR: Our association, which represents leading producers of drugs and medicines, has been informed that your committee will soon hold hearings on the budget for the Food and Drug Administration of the Department of Health, Education, and Welfare, for the fiscal year beginning July 1, 1958. Since the Food and Drug Administration administers the food and drug law under which our industry operates, this association is keenly interested in supporting the law enforcement activities of this Administration.

We understand that when the appropriation bill was passed by the House of Representatives it did not include an increase for the FDA, but authorized the same amount as was appropriated last year. In arriving at this decision, the House concurred with the decision of the Budget Bureau in cutting back an increase requested by the Administration.

You may be aware of the fact that the Citizens Advisory Committee in its report of June 1955 to the Secretary of Health, Education, and Welfare, recommended regular budget increases for the FDA for a period of about 5 years, in order to support necessary expansion of its important regulatory activities. This association at that time supported this recommendation. It is still the feeling of our association that a suitable increase should be provided in the FDA budget for next year, in accordance with the Administration's request, and as recommended by the Citizens Committee.

Accordingly, I have been requested, on behalf of this association, to urge that your committee and the Senate consider favorably the request submitted by FDA for additional funds and to authorize such an increase in their budget.

We have been greatly impressed with your interest in this and other matters relating to public health and are most appreciative of the time and energy which you have devoted to these affairs.

Sincerely yours,

FRANCIS C. BROWN, *President.*

THE PROPRIETARY ASSOCIATION,
April 11, 1958.

Hon. LISTER HILL,
Chairman, Senate Committee on Labor and Public Welfare,
United States Capitol, Washington, D. C.

DEAR SENATOR HILL: We are informed that the Committee on Labor and Public Welfare presently has before it for consideration the appropriations for the next fiscal year for the Department of Health, Education, and Welfare. The purpose of my letter relates to that portion of the budget for this Department as it concerns the Food and Drug Administration.

It is my understanding that the Citizens Advisory Committee of the Food and Drug Administration has recommended certain developments to improve this splendid agency that so importantly services the country. In accordance with the recommendations, financial provisions for the next fiscal year were made, and a total sum of $11,530,000 requested. The Bureau of the Budget reduced this figure drastically in transmitting the appropriations for HEW to the Congress.

We feel that it is important to continue the program so carefully laid out by the Citizens Advisory Committee, and for that reason earnestly recommend that your committee restore to the bill the sum of $2,150,000 which was deleted by the Bureau of the Budget. The program of the Food and Drug Administration has never been wasteful of public money, and has been administered prudently and in accordance with the public necessity the laws require it to administer. We therefore hope that your committee will support the restoration of these funds.

Respectfully submitted.

HOWARD A. PRENTICE.

AMERICAN DRUG MANUFACTURERS ASSOCIATION,
Washington, D. C., April 8, 1958.

Hon. LISTER HILL,
Chairman, Committee on Labor and Public Welfare,
United States Senate, Washington, D. C.

MY DEAR SENATOR HILL: The purpose of this letter is to express association support of an increase in the appropriation for the fiscal year beginning July 1, 1958, for the Food and Drug Administration of the Department of Health, Education, and Welfare. We are informed that your committee will soon hold hearings on the FDA budget.

The Citizens Advisory Committee, in its report of June 1955 to the Secretary of Health, Education, and Welfare, recommended regular increases in the budget for the Food and Drug Administration for a period of about 5 years, in order to provide necessary expansion of this important regulatory agency. The American Drug Manufacturers Association, which, as you know, represents the leading producers of drugs used by the medical and allied professions, supports this recommendation of the Citizens Advisory Committee.

A week or so ago the House of Representatives passed the appropriation bill for the HEW Department without including an increase for the Food and Drug Administration. The appropriation authorized by the House was no greater than the budget for last year. In taking this action, the House of Representatives went along with the decision of the Budget Bureau, to postpone the increase which the Citizens Advisory Committee had advocated. In its report, however, the House Committee on Appropriations recognized the need for more generous funds to enable the Food and Drug Administration to guard more effectively the integrity of the food and drug supplies of the Nation.

It is hoped that your committee, and also the Senate, will authorize a suitable increase in the FDA budget for next year, in accordance with the amount originally requested by the agency before the Budget Bureau cutback. This increase would, we understand, follow the plan suggested by the Citizens Advisory Committee.

I have discussed this situation with Mr. John T. Connor, president of Merck & Co., Inc., who is also chairman of a special committee of this association studying FDA problems. Mr. Connor concurs with the position expressed herein.

We are grateful for your interest in this and in similar matters of vital importance to the public health. With kindest personal regards.

Sincerely yours,

KARL BAMBACH,
Executive Vice President.

THE TOILET GOODS ASSOCIATION, INC.,
New York, N. Y., April 14, 1958.

Senator LISTER HILL,
Senate Office Building, Washington, D. C.

DEAR SENATOR HILL: I believe that the appropriation for the Food and Drug Administration for the coming fiscal year will shortly be before your committee. The Toilet Goods Association, representing more than 90 percent by volume of the perfume, cosmetic, and toilet-preparations industry now under regulation by the Food and Drug Administration, desires to go on record as opposing any reduction in the appropriation for this important agency.

We have found this agency to be one of the most effective, and one of the most reasonable, operating in Government today. Should it be possible under present budgetary conditions, we should like very much to see the committee recommend an appropriate increase in the Food and Drug Administration appropriations, in line with those suggestions recently by the Citizens Advisory Committee.

We commend the work of the Administration and believe that increased appropriations are necessary, not only for the protection of the public health, but in the interest of our industry.

Very truly yours,

S. L. MAYHAM, *Executive Vice President.*

FREEDMEN'S HOSPITAL

STATEMENT OF DR. CHARLES E. BURBRIDGE, SUPERINTENDENT, ACCOMPANIED BY DR. PAUL B. CORNELY, MEDICAL DIRECTOR, AND HENRY H. BAIRD, BUDGET AND FISCAL OFFICER, FREEDMEN'S HOSPITAL

SALARIES AND EXPENSES

[Salaries and expenses:] For expenses necessary for operation and maintenance, including repairs; furnishing, repairing, and cleaning of wearing apparel used by employees in the performance of their official duties; transfer of funds to the appropriation "Salaries and expenses, Howard University" for salaries of technical and professional personnel detailed to the hospital; payments to the appropriation of Howard University for actual cost of heat, light, and power furnished by such university; [$3,000,000] *$2,975,000: Provided,* That no intern or resident physician receiving compensation from this appropriation on a full-time basis shall receive compensation in the form of wages or salary from any other appropriation in this title: *Provided further,* That the District of Columbia shall pay by check to Freedmen's Hospital, upon the Surgeon General's request, in advance at the beginning of each quarter, such amount as the Surgeon General calculates will be earned on the basis of rates approved by the Bureau of the Budget for the care of patients certified by the District of Columbia. Bills rendered by the Surgeon General on the basis of such calculations shall not be subject to audit or certification in advance of payment; but proper adjustment of amounts which have been paid in advance on the basis of such calculations shall be made at the end of each quarter: *Provided further,* That the Surgeon General may delegate the responsibilities imposed upon him by the foregoing proviso.

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate	$3,000,000	$2,975,000	$2,975,000
Reimbursements	1,216,000	1,292,000	1,292,000
Additions: None			
Deductions: Reserve for savings	35,500		
Total obligations	4,180,500	4,267,000	4,267,000

Obligations by activities

	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Inpatient services:						
(a) General hospital	441	$2,477,313	445	$2,563,221	445	$2,563,221
(b) Tuberculosis hospital	72	403,860	72	410,154	72	410,154
2. Outpatient services	71	396,367	71	400,399	71	400,399
3. Training program	32	511,089	32	501,124	32	501,124
4. Administration	68	391,871	68	392,102	68	392,102
Total obligations	684	4,180,500	688	4,267,000	688	4,267,000

Obligations by objects

	1958 appropriation	1959 budget estimate	1959 House allowance
Total number of permanent positions	684	688	688
Full-time equivalent of all other positions	172	184	184
Average number of all employees	822	837	837
Number of employees at end of year	825	840	840
01 Personal services	$3,398,500	$3,466,400	$3,466,400
02 Travel	1,500	1,500	1,500
03 Transportation of things	325	400	400
04 Communication services	23,000	23,000	23,000
05 Rents and utilities	121,200	121,200	121,200
06 Printing and reproduction	3,650	3,650	3,650
07 Other contractual services	25,800	40,800	40,800
Services performed by other agencies	12,000	12,000	12,000
08 Supplies and materials	512,800	519,550	519,550
09 Equipment	43,125	61,940	61,940
11 Grants, subsidies and contributions:			
Contribution to retirement fund	137,500	143,350	143,350
15 Taxes and assessments	7,000	7,000	7,000
Subtotal	4,286,400	4,400,790	4,400,790
Deduct charges for quarters and subsistence	105,900	133,790	133,790
Total obligations	4,180,500	4,267,000	4,267,000

Summary of changes

	Positions	Amount
1958 actual appropriation	684	$3,000,000
Deduct nonrecurring equipment costs		−35,175
Deduct increased reimbursements from non-Federal sources		−76,000
Deduct reserve for savings		−35,500
1959 base		2,853,325
1959 appropriation request	688	2,975,000
Net change requested	+4	+121,675

Summary of changes—Continued

	1959 budget estimate		1959 House allowance	
	Position	Amount	Position	Amount
Increases:				
For mandatory items:				
Retirement contributions annualization (rate of 6.5 percent in 1959, 6.275 in 1958)		$4,870		$4,870
Within-grade promotions, reimbursable details		5,403		5,403
Subtotal, mandatory items		10,273		10,273
For program items:				
To improve services in physical medicine	4	17,106	4	17,106
4 additional employees on reimbursable detail		30,915		30,915
To provide 12 additional man-years of trainee positions		15,456		15,456
For repairs to buildings		15,000		15,000
To support supply requirements due to higher unit costs		6,750		6,750
To purchase new and replacement equipment		54,065		54,065
Increased quarters and subsistence deductions		−27,890		−27,890
Subtotal, program items	4	111,402	4	111,402
Total change requested	4	121,675	4	121,675

New positions requested, fiscal year 1959

	Grade	Annual salary
General hospital:		
Physical therapist	GS-7	$4,525
Occupational therapist	GS-7	4,525
Guidance worker	GS-7	4,525
Clerk-typist	GS-3	3,175
Total new positions, all activities (4)		16,750

General Statement

Senator Hill. Dr. Burbridge of Freedmen's Hospital.

We are glad to have you here, sir. Doctor, we will be glad now to have you proceed in any way you see fit, sir. You filed your statement with the clerk, I am sure.

Dr. Burbridge. Yes; I have a statement here I would like to read, Senator.

Senator Hill. Just proceed, sir.

Dr. Burbridge. Before I proceed I would like to introduce to the committee Dr. Paul Cornely, who is the medical director of the hospital.

Senator Hill. Glad to have you here, sir.

Dr. Burbridge. And Mr. Baird, who is the budget officer.

Senator Hill. Glad to have both of you with us.

Dr. Burbridge. Mr. Chairman and members of the committee, Freedmen's Hospital consists of a general hospital with a total of 320 beds and 50 bassinets; 150-bed tuberculosis hospital; and an outpatient department composed of 36 organized clinics and 2 emergency operating rooms.

The hospital's physical plant consists of 8 buildings located on 11 acres near the downtown area of Washington, D. C. Its buildings include separate general and tuberculosis hospital units, an outpatient

clinic building, 2 residences for nurses, a residence for interns, an auxiliary building, and a maintenance shop, all of which were constructed 25 to 50 years ago, with the exception of the tuberculosis hospital which was completed in 1940.

FUNCTIONS OF THE HOSPITAL

With the facilities described above, the hospital conducts activities embracing four basic functions, namely:

1. Medical care of patients through the provision of services on an inpatient and outpatient basis for substantially all types of illnesses. In this connection 131,796 patient days of service were rendered to 13,715 individuals on the inservice, and there were 91,022 patient visits to the outpatient service in fiscal year 1957.

2. The education of physicians, nurses, and other adjunct professional and technical personnel in 20 separate training programs involving approximately 180 hospital trainees, 150 medical students, and 60 affiliates, for a total of 390.

3. Coordination and integration of hospital programs with preventive medicine through the operation of outpatient clinics and cooperation with governmental and voluntary health and welfare agencies.

Fundamental research in medical sciences through the integration of the work of the preclinical scientist and the clinician. During fiscal year 1957, 20 research projects, financed through grants to Howard University, were in progress in the hospital.

Senator HILL. Would you supply for the record the amount of funds for these research projects, how much and how many came from National Institutes of Health, and how much and how many came from private foundations and other grants for research.

Dr. BURBRIDGE. I will be very happy to do that, sir.

(The information referred to follows:)

Research projects conducted in Freedmen's Hospital through grants to Howard University, fiscal year 1957

Project title	Source of grant	Amount
Studies on Plasma Insulin Levels and Insulin Inhibitors.	Public Health Service	$9,562.00
Treatment and Rehabilitation of Arthritic Patients	Arthritis and Rheumatism Foundation.	1,125.00
Studies in Paper Electrophoresis of Serum Proteins and Hemoglobin in Human Subjects.	Committee on Research of the Council on Chemistry of the American Medical Association.	920.00
The Bactericidal Effects of Erythromycin Against Streptococcus Hemolyticus Compared With Other Antibiotics.	Eli Lilly Co	7,408.58
Effects of Chronic Pulmonary Disease and Chest Surgery upon Cardiac and Pulmonary Function.	American Heart Association	5,197.50
Antimicrobial Agents and Hormones in Infectious Diseases.	Charles Pfizer Co	9,000.00
For Divisional Research	Parke, Davis & Co	1,002.86
Pulmonary and Cardiac Dynamics in Chronic Pulmonary Disease.	Public Health Service	6,900.00
Studies in Vitiligo	National Frontiers Vitiligo Foundation.	1,500.00
Aminoaciduria in Sickle Cell Disease	Public Health Service	2,239.00
Novobiocin (Cathomycin) in Common Pediatric Infections.	Merck, Sharpe & Dohme Co	1,100.00
For Support of the Educational Program for Residents.	Mead Johnson & Co	500.00
Study in Caloric and Nutritive Needs of Adrenalectomized Dogs.	do	250.00
Relationship of Cardiac and Renal Function	Public Health Service	18,565.00
Rose Bengal Eye in Blood Volume and Liver Functions.	Washington Heart Association	2,500.00
Cancer Teaching Grant	Public Health Service	25,000.00
Cancer Teaching Grant	District of Columbia Division of the American Cancer Society.	4,256.00
Cardiovascular Training Grant	Public Health Service	25,000.00
Undergraduate Training Grant in Neurology and Psychiatry.	do	21,502.00
Graduate Training Grant in Neurology and Psychiatry.	do	26,007.00
Total		169,534.94

SOURCE OF FINANCING

Dr. BURBRIDGE. The financing of the programs at Freedmen's Hospital is made possible by funds received from the following sources:

1. Federal Government, through direct appropriation.
2. District of Columbia government and other legal jurisdictions for the care of their indigent patients.
3. Individuals, through direct payment or through third-party plans.

CONGRESSIONAL DIRECTIVES, FISCAL YEAR 1958

In the 1958 Senate report the committee directed that no reductions be made in the nurse-training program because of the appropriation reduction. The hospital has complied with this directive. Funds from non-Federal sources were obtained to offset decreases made in the appropriation.

PROGRAM FOR FISCAL YEAR 1959

These estimates propose an appropriation for 1959 fiscal year which will be $25,000 less than the prior year. However, within the framework of the 1959 budget it will be possible, due to increased reimbursements, to effect several essential program improvements that are briefly described below.

1. Improvement of program in physical medicine: Little emphasis should have to be made of the importance of rehabilitation which, when properly carried out, contributes, even if in a numerically small way, to the preservation of the community's manpower potential. A portion of the hospital's normal patient load is composed of individuals on whom an intensive program of physical medicine and rehabilitation will contribute greatly to their return to an active community life. The present staff in physical medicine is handicapped by not having all of the professional services, nor the required full-time direction of a qualified physiatrist to render this type of service. The four classified positions and the physiatrist on reimbursable detail being requested will contribute in a large degree to improving this essential activity of the hospital.

2. Improvement of clinical laboratories: No hospital can maintain standards needed for adequate patient care and demanded by accreditation bodies without properly staffed and administered clinical laboratories. The present laboratory setup at Freedmen's Hospital does not allow for 24-hour coverage 7 days a week by technicians. Two of the positions requested under reimbursable details are to provide laboratory technicians for this coverage. An additional pathologist is being requested in order to provide full-time direction and supervision of clinical laboratories. At the present time the one pathologist on duty cannot adequately provide this service in addition to his responsibility for autopsies and the examination of surgical specimens.

3. Increased enrollment of student trainees: The institutions in this country considered the most capable of training medical personnel are the limited number of university affiliated hospitals, among which Freedmen's Hospital is honored to be counted. This privilege carries an obligation to give educational experience to as many students as facilities will permit. The request for the increased enrollment of approximately 12 man-years is to bring the number of such trainees to a figure more consistent with the hospital's training potential.

4. Necessary improvements in physical plant: Due to the age and physical characteristics of the present general hospital, which is one of the last remaining outmoded hospital facilities in the city, maintenance costs are higher than they should normally be. A modest sum of $15,000 is being requested to provide for repairs that cannot be performed by station personnel.

5. Equipment for physical plant: The increase being requested for the purchase of equipment is to provide funds for the replacement of obsolete, nonfunctional equipment, and the purchase of additional items that are needed to provide safe and adequate patient care.

REIMBURSEMENTS FROM NON-FEDERAL SOURCES

The additional funds estimated to be earned from non-Federal sources is occasioned by a revision of hospital rates to individual pay patients. It is anticipated that approximately $76,000 more will be earned from this source. This additional income will finance the major portion of the small program increases reflected in these estimates.

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HOUSE ALLOWANCE

Senator HILL. Doctor, the House allowed you the full budget estimate of $2,975,000.

Dr. BURBRIDGE. Yes, sir.

Senator HILL. Will that amount take care of all these different positions that you have addressed yourself to here?

Dr. BURBRIDGE. Yes, sir, it will.

Senator HILL. The Department request, which was $3,250,000, was a reduction by the budget of $275,000.

Dr. BURBRIDGE. Yes, sir.

Senator HILL. What was the additional $275,000 for?

Dr. BURBRIDGE. For 2 years at least now we have had empty beds in the tuberculosis hospital because of the decrease in the need for tuberculosis beds, and the amount of money that was cut out by the Bureau of the Budget was to implement these empty beds for use as chronic disease facilities. It was proposed that in 1959 this facility be opened and used for chronic diseases.

NEED FOR BEDS

Senator HILL. How much need do you have for chronic-disease beds?

Dr. BURBRIDGE. If the chairman will permit, I would like to refer the question to Dr. Cornely, who is the medical director of the hospital, and is quite conversant with public health problems.

Senator HILL. All right, Doctor.

Dr. CORNELY. Mr. Chairman, I think this is a very important problem. In our hospital at the present time we have anywhere from 55 to 60 patients who have been in the hospital for more than 30 days. These are chronically ill patients who could very well be benefited by all of the modalities of physical medicine, and we have recommended and suggested that if the present allocation of beds in the tuberculosis annex, which are empty, could be transformed into facilities for the care of the chronically ill, these patients could be cared for much better and actually much cheaper, and would be able to be returned to the community as much more effective individuals.

I think you realize, Mr. Chairman, that at the present time in this country there are some 15 million persons who are 65 years and over, and that to this group is being added 1,000 persons 65 years and older every day. These individuals are currently in the throes of chronic illness, and, therefore, there is a great need for their care. This is the first point.

The second point is the fact that it has been shown by innumerable surveys in this country, and particularly in Washington, that the Washington area is highly deficient in beds for the chronically ill. This is the one great deficiency in Washington. Therefore, there is need for care for the chronically ill in this area.

Senator HILL. What you say interests me, and the particular point that you make is if you have your beds set aside and equipped and the care attuned, so to speak, to the chronically ill, and you put your patients there rather than in a general hospital where you have a different type of illness and more acute, that it makes for economy. Is that not right?

Dr. CORNELY. Yes, sir.

Senator HILL. It costs more to care for a patient in what we call a general hospital bed than it does to care for a patient in a chronically ill bed. Is that not true?

Dr. CORNELY. That is true.

Senator HILL. Do you have any figures that you could give us on that? I am sure those figures have been compiled and would be available. No doubt the American Hospital Association and maybe even the American Medical Association have such figures.

Dr. CORNELY. Those figures are available.

Senator HILL. They studied this question, I know, and if you could give us some figures along those lines we would appreciate it.

(The information referred to follows:)

Cost per patient day in long-term and short-term non-Federal hospitals

Year	Long term	Short term	Year	Long term	Short term
National averages:			National averages—Con.		
1946	$2.97	$9.39	1954	$8.53	$21.76
1948	3.81	13.09	1955	8.06	23.12
1950	5.39	15.62	1956	10.20	24.15
1952	6.63	18.35	Mid-Atlantic area: 1956	11.01	23.64
1953	8.26	19.95			

Source: Hospitals, Journal of the American Hospital Association, Aug. 1, 1957, pt. 11.

NUMBER TO BE CARED FOR

Senator HILL. How many chronically ill patients would you contemplate taking care of if you had these additional funds and could convert these tuberculosis beds for the chronically ill?

Dr. CORNELY. We would have an addition of 68 beds, Mr. Chairman. At the present time the tuberculosis annex is taking care of tuberculosis patients on the second floor, and this area handles approximately 58 patients. We have approximately 68 additional beds now which are empty, and this would care for this group of patients.

Senator HILL. We know in tuberculosis one of the most compelling things is isolation. Is your setup in that annex such that your chronically ill patients, if you had them there, would be and could be properly and adequately isolated so they would not contract this most contagious disease?

Dr. CORNELY. Yes, they would be.

Dr. BURBRIDGE. They would be on separate floors, Mr. Chairman.

DECLINE OF TUBERCULOSIS

Senator HAYDEN. I might inquire, Mr. Chairman, about the decline of tuberculosis.

When did that decline begin and how long has it been going on, to a moderate degree?

Dr. CORNELY. The decline in tuberculosis?

Senator HAYDEN. Yes.

Dr. CORNELY. I would say that the decline has taken place in the last 5 to 7 years. It began when the new drugs were discovered, the new chemical drugs which made it possible to treat tuberculosis.

In the past 5 or 6 or 7 years we have seen this decline in the mortality of tuberculosis so that, whereas for many years tuberculosis was the

seventh cause of death in this country, tuberculosis now is not in the first 10 causes of death.

However, I should like to make this statement because I think it is important to make: that, even though we have had this great decline in tuberculosis morality, there are a lot of people still with tuberculosis, and the Public Health Service made a survey about 2 or 3 years ago in which they showed that there were approximately 1,200,000 persons still with tuberculosis; 500,000 of these were active and they needed care, and many of them were not receiving care. So that we still have quite a load of people who need care for tuberculosis.

Senator HAYDEN. A few years ago climate was supposed to be the cure, and they came to my State of Arizona in great numbers. The number has declined very materially and I am very glad to hear these new drugs and methods are making it so that it no longer is the great killer that it was.

Senator HILL. These people who have active tuberculosis not only need the care but it is so materially important to isolate them from your well people because this disease is so contagious. Is that not true?

Dr. CORNELY. That is right.

Senator HILL. Senator Smith.

Senator SMITH. I have no questions.

Senator HILL. Senator Dworshak.

Senator DWORSHAK. One question, Doctor.

OVERALL BUDGET

I have noticed that your sources of financing is broken down into three categories. What is your overall general budget from all sources?

Dr. BURBRIDGE. The budget for all sources for 1959 is $4,267,000.

Senator DWORSHAK. And of that the Federal Government provides approximately $3 million?

Dr. BURBRIDGE. Yes, sir.

Senator DWORSHAK. What does the District of Columbia contribute?

Mr. BAIRD. $359,500.

Senator DWORSHAK. Paid on the basis of the remaining cases cared for?

Mr. BAIRD. Certified District of Columbia indigent residents cared for in Freedmen's Hospital.

Senator DWORSHAK. And none of the individuals pay the remaining?

Mr. BAIRD. Approximately $30,000 comes from the neighboring communities in Maryland and Virginia, the counties in Maryland and Virginia.

Senator DWORSHAK. You do not collect any charges of patients within the District?

Mr. BAIRD. Oh, yes. The remaining revenue comes from patients within the District, and patients who are individually responsible for their own beds.

Senator DWORSHAK. What part of your total budget is paid by individuals other than Federal and District contributions?

Mr. BAIRD. In 1959 it is estimated $898,225 will be paid by individuals.

Senator DWORSHAK. And then apparently wherever the patient is able to take care of the cost of hospitalization you see that he does do that?

Mr. BAIRD. That is true, sir.

Senator DWORSHAK. That is all, Mr. Chairman.

Senator HILL. Senator Thye.

Senator THYE. Mr. Chairman, unfortunately, I just got to the committee, and I am just hurriedly going through the statement. Therefore, I have no questions. I will acquaint myself with it.

I notice that there is a minus here, is there not, of $25,000?

Dr. BURBRIDGE. That is right.

Senator THYE. And you have requested of the committee the restoration of this $25,000?

Dr. BURBRIDGE. No, sir. This is $25,000 less than last year's sum.

Senator THYE. That is why I qualified myself by saying that I just arrived in here, and I saw the minus and I wondered whether it meant that you had insufficient funds.

Dr. BURBRIDGE. No, sir.

Senator HILL. The House allowed the full budget estimate.

Dr. BURBRIDGE. I simply want to say, if Senator Thye has any questions, we will be happy to receive them and prepare answers for submission.

Senator THYE. I am sure that your explanation, as I have an opportunity to look through it, will clarify any question. Thank you, sir.

Senator HILL. Thank you very much, Doctor, and all of you gentlemen. Thank you very much.

Dr. BURBRIDGE. Thank you.

Senator HILL. Dr. Elstad of Gallaudet College. Mr. Johnson, it is nice to have you here too, sir.

Doctor, we will be glad to have you proceed in your own way, sir.

GALLAUDET COLLEGE

STATEMENT OF DR. LEONARD M. ELSTAD, PRESIDENT, ACCOMPANIED BY LLOYD M. JOHNSON, BUSINESS MANAGER

APPROPRIATION ESTIMATE

"SALARIES AND EXPENSES

"[Salaries and expenses:] For the partial support of Gallaudet College, including personal services and miscellaneous expenses, and repairs and improvements, as authorized by the Act of June 18, 1954 (Public Law 420), [$730,000] *$785,000*: *Provided*, That Gallaudet College shall be paid by the District of Columbia, in advance at the beginning of each quarter, at the rate of $1,295 per school year for each student attending and receiving instruction in elementary or secondary education pursuant to the Act of March 1, 1901 (31 D. C. Code 1008)."

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate	$730,000	$785,000	$785,000
Advances and reimbursements:			
From other accounts	15,660	10,000	10,000
From non-Federal sources	266,759	272,419	272,419
Total available for obligation	1,012,419	1,067,419	1,067,419

Obligations by activity

	1958 estimate		1959 estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. General administration	11	$80,382	11	$82,302	11	$82,302
2. Resident instruction and departmental research:						
(a) Gallaudet College	67	416,788	67	434,138	67	434,138
(b) Kendall School	20	97,430	20	102,205	20	102,205
3. General library	6	60,400	6	61,925	6	61,925
4. Operation and maintenance of physical plant	36	191,830	40	218,910	40	218,910
5. Auxiliary services and noneducational expenses	31	165,589	31	167,939	31	167,939
Total positions and obligations	171	1,012,419	175	1,067,419	175	1,067,419

Obligations by objects

	1958 estimate	1959 estimate	1959 House allowance
Non-Federal employees:			
Total number of permanent positions	171	175	175
Full-time equivalent of all other positions	5	5	5
Average number of all employees	170	174	174
Number of employees at end of year	171	175	175
01 Personal services:			
Permanent positions	$718,780	$755,180	$755,180
Positions other than permanent	20,000	20,000	20,000
Other personal services	500	500	500
Total personal services	739,280	775,680	775,680
02 Travel	3,500	3,500	3,500
03 Transportation of things	1,500	1,500	1,500
04 Communication services	5,000	5,000	5,000
05 Rents and utility services	12,500	15,500	15,500
06 Printing and reproduction	250	250	250
07 Other contractual services	50,000	57,200	57,200
08 Supplies and materials	126,059	131,409	131,409
09 Equipment	50,000	50,000	50,000
11 Grants, subsidies, and contributions	46,000	49,050	49,050
15 Taxes and assessments	750	750	750
Subtotal	1,034,839	1,089,839	1,089,839
Deduct quarters and subsistence charges	−22,420	−22,420	−22,420
Total obligations	1,012,419	1,067,419	1,067,419

Summary of changes

	Positions	Amount
1958 actual appropriation	171	$730,000
Deduct nonrecurring items:		
Other contractual services		−10,000
Equipment		−11,000
1959 base	171	709,000
1959 appropriation request	175	785,000
Net change requested	+4	+76,000

Summary of changes—Continued

	1959 budget estimate		1959 House allowance	
	Position	Amount	Position	Amount
Increases:				
For mandatory items: Retirement contributions, annualization of 1959 base (rate of 6.5 percent in 1959, 6.275 percent in 1958) for 82 positions	--------	$786	--------	$786
For program items:				
Improvement in maintenance, protection, and operation of physical plant	4	28,556	4	28,556
Within-grade salary increases for faculty and administrative staff	--------	24,000	--------	24,000
Increased retirement and group life insurance contributions	--------	1,658	--------	1,658
Additional educational equipment and supplies	--------	11,000	--------	11,000
Renovation of present men's dormitory	--------	10,000	--------	10,000
Total program increases	4	75,214	4	75,214
Total change requested	4	76,000	4	76,000

New Positions Requested, Fiscal Year 1959

Non-Federal employees, ungraded positions—Operation and maintenance of physical plant

	Annual salary
Janitors (3)	$9,000
Watchman	3,450
Total, new positions (4)	12,450

Appropriation Estimate

"CONSTRUCTION

"[Construction:] For the *preparation of plans and specifications for* construction and equipment of buildings and facilities on the grounds of Gallaudet College, as authorized by the Act of June 18, 1954 (Public Law 420), under the supervision of the General Services Administration, [including planning, architectural, and engineering services, $1,690,000] *$123,000,* to remain available until [June 30, 1959] *expended,* as follows: For [a cafeteria and service building and a men's dormitory, together with] *an auditorium; a classroom and dormitory building, Kendall School; greenhouses; athletic fields and stands; maintenance building; maintenance personnel apartments; and* alterations, installations, [and] equipment, [in connection with such construction, and for beginning] roads, walks, and grading [in connection with such construction]."

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate	$1,690,000	$123,000	$123,000

Obligations by activities

	1959 estimate	1959 budget estimate	1959 House allowance
1. Design, supervision, etc	$179,500	$227,350	$227,350
2. Construction	2,178,500	1,782,650	1,782,650
Total obligations	2,358,000	2,010,000	2,010,000

Obligations by objects

	1959 estimate	1959 budget estimate	1959 House allowance
02 Travel	$100	$200	$200
06 Printing and reproduction	10,000	14,500	14,500
07 Other contractual services	178,900	222,050	222,050
08 Supplies and materials	500	100	100
09 Equipment	57,000	267,400	267,400
10 Lands and structures	2,111,500	1,505,750	1,505,750
Total obligations	2,358,000	2,010,000	2,010,000

Summary of changes

1958 actual appropriation	$1,690,000
Deduct nonrecurring construction costs	−1,690,000
1959 base	
1959 appropriation request	123,000
Net change requested	+123,000

	1959 budget estimate	1959 House allowance
Increases for program items: Plans and specifications for the 4th stage of the building program	$123,000	$123,000
Total change requested	123,000	123,000

General Statement

Dr. Elstad. I have a short opening statement I would like to read.

Senator Hill. All right, sir.

Dr. Elstad. Gallaudet College, the only higher educational institution devoted exclusively to the education of the deaf, has been supported by Federal appropriations since 1857.

This Federal support in recent years for the operation of the research instructional, and teacher preparation programs of the college and for the construction program was instrumental in aiding the college to attain this past year full accreditation by the Middle States Association of Colleges and Secondary Schools.

The budget request for 1959 will provide increases designed to strengthen the college programs and continue support for activities initiated in earlier years. The total request of $785,000 will permit increases for the following purposes: $3,250 to cover such mandatory costs as retirement and group life insurance; $24,000 to provide within-grade salary increases for faculty and administrative personnel within the framework of the existing salary scale; $11,000 for educational equipment; $10,000 for renovating the existing men's dormitory, which will continue in use even after the new men's residence is constructed; and $27,750 and 4 positions for the maintenance and operation of the enlarging physical plant.

These increases are offset, in part, by nonrecurring costs of $21,000 in 1958.

RESEARCH PROJECTS

The college wishes particularly to highlight the research projects which were initiated this year. They concern a central index on the

sociological and psychological aspects of deafness and an analysis of the language of signs.

The 1959 budget provides funds for continuing these projects. These studies, together with the range of services and the facilities available through the speech and hearing clinic, will enable the college to exploit its unique opportunities to serve as a national clearinghouse and research center on problems associated with deafness.

CURRENT PROGRESS OF CONSTRUCTION

Congress has approved a master development plan for Gallaudet College, and in fiscal years 1956, 1957, and 1958 appropriations provided $6,462,000 for 6 buildings, together with necessary equipment, grading, and outside services. In addition, provision was made in fiscal year 1955 for a library.

The library was completed in 1956. The first building in the comprehensive construction program, the women's residence hall, was turned over to the college for occupancy on October 1, 1957.

The physical activities heating plant building is expected to be completed and ready for occupancy the latter part of April 1958.

We hope to have our graduation exercises in that building, by the way.

Contracts have been let and work has begun on the speech and hearing center and classroom-science building. Private architects have been contracted and plans and specifications are on the drawing boards for the men's residence hall and the cafeteria and service building.

The current timetable indicates the offering of bids for construction for these two latter units during the latter part of April or the first of May 1958.

The college building program now being carried out under the supervision of the Public Building Services of the General Services Administration has been planned in 4 stages at an estimated overall cost of $8,602,000.

Funds have been provided by the Congress for the first three stages: the fourth and last stage contemplates the construction of an auditorium-classroom and dormitory for Kendall School, greenhouses, athletic fields and stands, maintenance group buildings, and outside services, roads, walks, and grading, at an estimated cost of $2,140,000.

It is most essential that this final stage of construction be completed as the buildings requested are necessary to the fulfillment of the program, as outlined in the master development plan by the Congress, and to meet the standards required by the Middle States Association of Colleges and Secondary Schools in maintaining accreditation.

1959 BUDGET REQUEST

The request is herein made for the appropriation of funds in the amount of $123,000 for plans and specifications covering this final stage of the master development plan. It is proposed to ask for the balance of construction money, amounting to $2,017,000, in the future.

Experience of planning for the first, second, and third states of the building program indicates that it takes approximately 1 year before plans and specifications can be drawn and completed.

The sum of $123,000 is, therefore, requested to cover the costs of plans and specifications for the fourth and final stage of construction, and it is expected that this request will enable the building program to proceed without significant delay.

To aid the college in its many contacts with the General Services Administration and the several contractors working on the Gallaudet campus, plans are underway to retain a consultant to provide assistance on the technical problems arising during the course of planning and erecting the buildings in the construction program.

This arrangement will be financed through contingency construction funds, and I might say that this person has been employed and is now on the job.

There is a formal statement which we would like to put in the record.

(The statement referred to follows:)

STATEMENT OF PRESIDENT, GALLAUDET COLLEGE

Gallaudet College is the only college of higher learning in the world exclusively devoted to the education of the deaf. The institution was organized in 1857 and has been supported in part by annual Federal appropriations since its inception. It possesses unique responsibilities and opportunities. The Congress has recognized these responsibilities by the passage of Public Law 420 (83d Cong.) which amended the charter of the college and defined its relationship with the Federal Government. A total appropriation of $785,000 is requested for the fiscal year 1959.

ACCREDITATION

Partly as a result of the new positions created in the faculty staff and auxiliary staff last year, thus affording expansion of curriculum, the endeavors of a decade were reached through the college's gaining of accreditation on May 1, 1957.

RESEARCH PROGRAM

The basic purpose of this program is to exploit the unique opportunities of the college in becoming a national clearinghouse and research center concerned with problems associated with deafness.

Two research studies were begun in 1957–58. The establishment of a central research index on sociological and psychological aspects of deafness and a project on the structual analysis of the language of signs. Both of these projects were initially reviewed and approved by a research advisory committee appointed by the National Institutes of Health. These studies will continue through the coming fiscal year.

THE HEARING AND SPEECH CENTER

The hearing and speech center, for which funds were provided in fiscal year 1958, is an integral part of Gallaudet College which, in essence, is an institute for the study of deafness. Its primary functions are threefold: first, to provide services for deaf students of the college and the laboratory school; second, to provide clinical training facilities for graduate students; and third, to engage in research.

Services

In addition to the medical examinations made in the college health office, services available through the hearing and speech center for the college and Kendall School populations include comprehensive audiological and related psychological evaluations, provisions for the recommendation and procurement of prosthetic devices related to audition. In addition, such services will be available to a limited number of outpatients. Instruction in speech and speechreading (lipreading), auditory training, and instruction in the simultaneous method of communication are also offered to the college population.

Professional training

Course work and clinical facilities for graduate students in training are provided in the center. At present the graduate students are those preparing to become teachers of the deaf.

Research

Intramural and extramural research efforts will be directed toward communication problems as well as educational, audiological, and psychological aspects of hearing impairment.

KENDALL SCHOOL

The Kendall School is the laboratory teaching school for the college department of education. Teacher supply for schools for the deaf in the Nation is a serious problem. Gallaudet College has recognized this situation by the establishment of a teacher-training program.

The school provides education at the primary and secondary level for deaf public school children from the District of Columbia and other areas. This department is the original school and its centennial was celebrated in November 1957.

REQUESTS FOR 1959 INCREASED FUNDS

Increases are requested for fiscal year 1959 offset partially by nonrecurring costs in 1958 are as follows:

Salary increases.—Within-grade salary increases limited to grade maximums already established are requested for faculty and administrative personnel in the amount of $24,000. The present salary scale of the college is based on 1951–52 medians of salaries paid in similar institutions in this region and provides for within-grade increases similar to those awarded in the Federal Government to recognize satisfactory service of staff members. It is important that this amount be made available so that the college will more nearly be able to retain and attract competent personnel.

Employee benefits.—Public Law 362 (81st Cong.) extended the Civil Service Retirement Act to employees of Gallaudet College. In addition, Public Law 935 (84th Cong.) provided coverage for Gallaudet College employees under the Federal employees group life insurance program. An increase of $3,250 is requested for these purposes in 1959.

Operation and maintenance.—Two major buildings now under construction, the classroom-laboratory building and the speech and hearing center, should be completed during the coming fiscal year. To care for these buildings and for their protection, and to strengthen this department, additional funds in the amount of $12,400 are requested to provide salaries for 3 additional maintenance personnel and 1 additional watchman. Other requested increased funds associated with the expanding physical plant of the college are $15,350.

Other increases.—Two other increases requested in 1959 are $10,000 for renovation of the present men's dormitory and $11,000 for educational supplies and equipment.

SALARY SCHEDULES

Senator HILL. As you have said, you are the only higher institution devoted exclusively to the education of the deaf; is that right?

Dr. ELSTAD. That is right.

Senator HILL. How does your salary schedule compare with other comparable institutions?

Dr. ELSTAD. Our present salary scale was established in 1956 and based on figures taken before that time and at the time it was made, it stood up very well. But with the traffic in professors, we stand to lose some of our best professors unless we can get our scale up, so we have been making several studies of this.

We have a branch of the American Association of College Professors on the campus. They have made a study. The faculty as a whole has made a study and the board of directors has made a study of our salary schedule as it compares with others.

Being a unique institution we have to recruit well-qualified professors, but they have to have the added interest of learning a new means of communication, so that it is more difficult for us to recruit them.

For that reason, our salary schedule has to be attractive or we have difficulty.

Senator HILL. Of course all you are teaching has to be in the sign language of the deaf.

Dr. ELSTAD. It is the simultaneous method; sign language together with speech at the same time.

RESULTS OF SALARY STUDIES

Senator HILL. You spoke of that study. What does that study show?

Dr. ELSTAD. It shows that we are below what we should be at this time, and we would be glad to furnish the committee with these figures.

Senator HILL. I wish you would. We would be happy to have those figures if you would furnish them to us.

Dr. ELSTAD. Glad to.

(The information referred to follows:)

A REVISED SALARY SCALE FOR THE FACULTY OF GALLAUDET COLLEGE

Present scale, history and comments

1. The salary scale presently in force was formulated in 1952, using as a base the median salaries paid in six small institutions in the New England and middle Atlantic area. The American Association of University Professors reported these salaries as part of a study published in its winter 1952 bulletin. The six institutions were chosen, as were other institutions considered in the study, because they "followed good academic practice in reference to instructional salaries and salary schedules."

2. The median salaries that served as the base of our present scale were reported as follows:

Instructors	$3, 150–$4, 187
Assistant professors	4, 250– 5, 250
Associate professors	5, 350– 6, 725
Professors	6, 550– 9, 000

3. The scale that was constructed on this base is described below:

Instructors (in 4 annual increments of $250)	$3, 150–$4, 150
Assistant professors (in 4 annual increments of $250)	4, 400– 5, 400
Associate professors (in 4 annual increments of $250)	5, 650– 6, 650
Professors (in 7 annual increments of $350)	6, 500– 8, 950

Applications:

(*a*) The increments within each rank are automatic.

(*b*) Promotions from one rank to another are made on recommendation of the president.

(*c*) At his discretion, an increment larger or a salary higher than that provided in the scale may be recommended by the president.

4. This scale was approved in 1954 by the board of directors of the college, by the faculty, by the Department of Health, Education, and Welfare, and by the Bureau of the Budget. In 1955–56 we received money to establish the scale (i. e., bring up to the minimum all persons below the minimum; pay the annual increment to all persons within the range for their rank).

5. Although this scale was adequate to attract the new instructors that we needed in order to secure accreditation, it has now become inadequate. The evaluation team of the Middle States Association that visited us in 1957 commented that "the salary scale needs prompt revision upward"; the association has required us to report by October 1, 1958, 1959, and 1960, on our progress in meeting this and all other recommendations made in the team's report.

A revised scale

1. The base upon which our present scale was constructed has risen in the past 6 years to the points indicated below (median salaries in the same institutions as

reported in the winter 1957 bulletin of the American Association of University Professors):

Instructors	$4, 250–$5, 200
Assistant professors	5, 300– 6, 450
Associate professors	6, 600– 7, 950
Professors	8, 400–12, 000

2. A new scale constructed upon this base has been formulated and approved by the faculty and by the board of directors of the college:

Instructors (in 4 annual increments of $250)	$4, 250–$5, 250
Assistant professors (in 4 annual increments of $250)	5, 400– 6, 400
Associate professors (in 6 annual increments of $250)	6, 650– 8, 150
Professors (in 10 annual increments of $360)	8, 400–12, 000

3. Among the arguments advanced in support of the new scale, the following seem especially pertinent:

(*a*) It is constructed upon the same base that was authorized for our present scale. Since the base has risen substantially, our faculty should be entitled to a new scale constructed upon the risen base.

(*b*) To produce, for a new scale, some less favorable grounds of comparison than the six institutions whose median salaries now serve as our base would seriously affect the now excellent morale of our faculty, and would immediately threaten us with the loss of some of our key teachers and researchers. If the base was thought proper at a time when our faculty was half its present size, and the program and facilties of the college were not worthy of accreditation, it should be no less proper now at a time when the college has become accredited and is rapidly acquiring the reputation of a first-class institution. If the base be considered favorable, our faculty feel that they are entitled to no less, in view of their qualifications, and in view of the difficulty of working with handicapped students, who demonstrably need more time and effort than do college students who are not so handicapped.

Cost of the new scale

To establish the new scale by bringing the salaries of all persons below the new minimum up to the new minimum, and paying the standard increment to those whose salaries would fall within the new ranges, would cost an estimated $29,315 in addition to what is requested in our present budget for 1958–59 salaries under the present scale.

FUNDS NEEDED

Senator HILL. What does the study show so far as additional funds that might be needed to bring your salaries up?

Dr. ELSTAD. About $30,000.

Senator HILL. That would then put your salaries in line with other comparable educational institutions?

Dr. ELSTAD. It would, and enable us to recruit very satisfactorily.

Senator HILL. Do you think then that that would mean that these teachers that you spoke of—are fearful might leave you—would remain with you?

Dr. ELSTAD. I am sure they would. They are interested, but they still have to live.

Senator HILL. I would say that your teachers have impressed me. Certainly most of them are dedicated people.

Dr. ELSTAD. They are very devoted people.

Senator HILL. Senator Hayden?

Senator HAYDEN. No questions.

Senator HILL. Senator Thye?

Senator THYE. I have no questions. It is a very informative statement, Mr. Chairman.

Senator HILL. Doctor, we are certainly very much obliged to you and Mr. Johnson.

Howard University

STATEMENT OF DR. MORDECAI W. JOHNSON, PRESIDENT

APPROPRIATION ESTIMATE

Salaries and Expenses

"[Salaries and expenses:] For the partial support of Howard University, including personal services and miscellaneous expenses and repairs to buildings and grounds, [$3,800,000] *$4,000,000.*"

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate	$3,800,000	$4,000,000	$3,900,000
Advances and reimbursements from other accounts	313,507	351,253	351,253
Reimbursements from non-Federal sources	2,995,777	3,030,777	3,030,777
Total available for obligation	7,109,284	7,382,030	7,282,030

Obligations by activities

	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
Program by activities:						
1. General administration	98	$657,285	98	$657,285	98	$657,285
2. Resident instruction and departmental research	713	4,199,354	731	4,431,204	724	4,377,500
3. General library	34	178,439	34	178,439	34	178,439
4. Operation and maintenance of physical plant	160	950,485	168	991,381	168	945,085
5. Auxiliary enterprises and noneducational expense	132	1,123,721	132	1,123,721	132	1,123,721
Total obligations	1,137	7,109,284	1,163	7,382,030	1,156	7,282,030

Obligations by objects

	1958 appropriation	1959 budget estimate	1959 House allowance
Total number of permanent positions	900	926	919
Full-time equivalent of all other positions	237	237	237
Average number of all employees	1,137	1,163	1,156
Number of employees at end of year	1,448	1,474	1,467
01 Personal services	$5,019,003	$5,253,038	$5,199,334
02 Travel	68,406	68,406	68,406
03 Transportation of things	2,881	2,881	2,881
04 Communication services	49,794	49,794	49,794
05 Rents and utility services	127,895	129,095	129,095
06 Printing and reproduction	53,852	53,852	53,852
07 Other contractual services	369,552	370,452	324,156
08 Supplies and materials	716,175	737,014	737,014
09 Equipment	168,823	182,359	182,359
11 Grants, subsidies, and contributions	430,405	430,405	430,405
12 Pensions	21,473	21,473	21,473
15 Taxes and assessments	81,025	83,261	83,261
Total obligations	7,109,284	7,382,030	7,282,030

New positions requested, fiscal year 1959

Non-Federal employees	Grade	Number of positions	Annual salary
Resident instruction:			
Professor		2	$18,950
Associate professor		5	40,250
Assistant professor		5	36,515
Instructor		2	11,692
Pathologist [1]	GS-15	1	11,610
Physiotrist for chronic diseases and physical therapy [1]	GS-15	1	11,610
Technicians [1]	GS-5	2	7,340
Total		18	137,967
Operation and maintenance of physical plant:			
Painter	CPC-6	1	3,525
Plumber	CPC-6	1	3,525
Guard	CPC-4	1	3,040
Janitors	CPC-3	5	14,478
Total		8	24,568
Total new positions, all activities		26	162,535

[1] Reimbursable positions in Freedmen's Hospital.

Summary of changes

	Positions	Amount
1958 actual appropriation	1,137	$3,800,000
1958 supplemental appropriation		0
Total appropriation	1,137	3,800,000
Deduct nonrecurring repairs to plant		−100,000
Revised 1958 base	1,137	3,700,000
1959 appropriation request	1,159	4,000,000
Net change requested	22	+300,000

	1959 budget estimate		1959 House allowance	
	Position	Amount	Position	Amount
Increases:				
For program items:				
For accommodation of increased enrollment and improvement of instruction—				
Teaching positions, medicine and dentistry	14	$107,407	7	$53,703
Educational supplies and equipment		21,697		21,697
Merit salary increases for instructional staff		65,000		65,000
	14	194,104	7	140,400
Less: Increased student fee income		−35,000		−35,000
Total	14	159,104	7	105,400
For the improvement of operation and maintenance of physical plant—				
Positions	8	26,118	8	26,118
Supplies and expenses		14,778		14,778
Emergency repairs		100,000		53,704
Total	8	140,896	8	94,600
Total change requested	22	300,000	15	200,000

EFFECT OF HOUSE ACTION

Activity No. 1. General administration

No change was made in this activity by the House allowance.

Activity No. 2. Resident instruction and departmental research

The request for net appropriation increase in this activity was $159,104 for the following items: (1) 14 additional teachers to accommodate increased enrollments in medicine and dentistry, $107,407; (2) educational supplies, materials and equipment, $21,697; and (3) for merit salary increases for the instructional staff, $65,000. The total of these items, amounting to $194,104, is reduced by $35,000 from increased student fee income, thereby making the net increase for resident instruction and department research $159,104.

The House allowance reduces request for this activity by $53,704, and makes it necessary to cut out 7 of the 14 additional teachers urgently needed to accommodate increased enrollments in medicine and dentistry during school year 1958–59. The items of increase retained by House action are as follows:

7 additional teachers in medicine and dentistry	$53, 703
Educational supplies and equipment	21, 697
Merit salary increases for instructional staff	65, 000
Total	140, 400
Less: Increased tuition and fee reimbursement from increased enrollment	35, 000
Total	105, 400

Activity No. 3. General library

No change was made in this activity by House allowance.

Activity No. 4. Operation and maintenance of physical plant

A request for an increased appropriation of $40,896 was made to cover balance required to operate and maintain the new preclinical physical plant in medicine. Request was also made for the reappropriation of $100,000 made available in 1958 for partial elimination of accumulated deterioration in physical plant. The request for reappropriation of $100,000 in 1959 was earmarked for continued elimination of physical plant deterioration.

House action on the above request permitted the university to retain the $40,896 item for operation and maintenance of the new physical plant for preclinical medicine, but required a reduction of $46,296 in request for reappropriation of $100,000 designed to continue program for the elimination of accumulated deterioration of physical plant. The sum of $53,704 will be available in 1959 for this purpose.

Activity No. 5. Auxiliary enterprises and noneducational expense

No change was made in this activity by the House allowance.

APPROPRIATION ESTIMATE

"*PLANS AND SPECIFICATIONS*

"[Plans and specifications:] For the preparation of plans and specifications for construction, under the supervision of the General Services Administration, on the grounds of Howard University, of a physical education building [and a home economics building, $150,000], *$171,000*, to remain available until [June 30, 1959] *expended.*"

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate	$150, 000	$171, 000	$123, 000
Prior year balance brought forward	14, 623	7, 741	7, 741
Total available for obligation	164, 623	178, 741	130, 741

Obligations by activities

	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
Law school building		$4,500				
Administration building		500				
Men's dormitory		1,706				
Preclinical medical building		1,976				
Physical education building		80,000		$171,000		$123,000
Home economics building		68,200				
Total obligations		156,882		171,000		123,000
Unobligated balance		7,741		7,741		7,741
Total obligations and balance		164,623		178,741		130,741

Obligations by objects

	1958 appropriation	1959 budget estimate	1959 House allowance
07 Other contractual services	$156,882	$171,000	$123,000

Appropriation Estimate

"CONSTRUCTION OF MEN'S DORMITORY (LIQUIDATION OF CONTRACT AUTHORIZATION)

"For payment of obligations incurred under authority previously provided, to enter contracts for the construction of the men's dormitory, $163,000.

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate		($163,000)	($163,000)
Unobligated balance brought forward	$3,010,415	582,000	582,000
Contract authorization (new)	860,000		
Total available for obligation	3,870,415	582,000	582,000

Obligations by activities

	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
Men's dormitory		$395,510		$11,000		$11,000
Auditorium, fine arts building		2,470,905				
Total obligations		2,866,415		11,000		11,000
Unobligated balance carried forward		582,800		571,800		571,800
Unobligated balance no longer available:						
Contract authorization		421,200				
Total obligations and balance		3,870,415		582,800		582,800

Obligations by objects

	1958 appropriation	1959 budget estimate	1959 House allowance
10 Lands and structures	$2,866,415	$11,000	$11,000

PREPARED STATEMENT

Senator HILL. Dr. Johnson, we are very happy to have you with us, sir. We will be glad to have you make any statement you see fit.

Dr. JOHNSON. Thank you very much, Mr. Chairman. I would like to submit for the record a general historical and background statement and a formal statement.

Senator HILL. All right, they will go in the record at this point, Doctor.

(The statements referred to follow:)

GENERAL HISTORICAL AND BACKGROUND STATEMENT BY MORDECAI W. JOHNSON, PRESIDENT, HOWARD UNIVERSITY

Mr. Chairman and members of the committee, I have the honor to present herewith an historical and background statement on behalf of Howard University which it is hoped will serve to set before you (A) the nature of Howard University and its place in American higher education; (B) the special relationship of the United States Government to Howard University; and (C) the present status of the university.

A. THE NATURE OF HOWARD UNIVERSITY AND ITS PLACE IN AMERICAN HIGHER EDUCATION

1. Howard University was chartered by act of Congress on March 2, 1867. It was the purpose of the founders to admit students of both sexes, and of every race, creed, color, and national origin. But it was one of the major purposes of the founders to admit Negro youth, among others, to all of its educational offerings. The institution has pioneered in the offering of professional training to Negro youth in medicine, dentistry, pharmacy, engineering, architecture, law, music, and social work, as well as in the teaching profession and religion. During the school year 1956–57, the university served 5,020 students in its 10 major schools and colleges and in the summer school.

2. During the period of 90 years between 1867 and 1957 Howard University has been the only university of public support in the Southern States which freely and substantially admitted Negro youth to any approximation of the wide scope of undergraduate, graduate, and professional opportunities characteristic of the American State university.

3. During the entire 90 years of its history Howard University has graduated a larger body of Negro physicians, dentists, pharmacists, engineers, architects, musicians, lawyers, and social workers than all other universities of public support combined, in all the Southern States.

4. From the beginning of its work until the end of 1957, Howard University has graduated a total of 19,823 persons. By far the large majority of these graduates have been Negroes. These graduates are at work in 43 States and 27 foreign countries. In every population center in the United States they constitute the largest and most diversified group of trained Negro public servants related to any single institution in the world.

5. Since 1948 public institutions in 12 Southern States, hitherto closed to Negroes have little by little, opened their doors to Negro youth but in the year 1957 Howard University still enrolled a larger number of Negro students in medicine, dentistry, pharmacy, music, engineering, architecture, and social work than in all other public universities and colleges together in the entire area of the Southern States.

6. The national importance of Howard University as a trainer of Negro professional students is nowhere better illustrated than by reference to medicine and dentistry. If Meharry Medical College at Nashville, Tenn., alone be excluded, the enrollment of medical and dental students at Howard University in 1957 exceeded the enrollment of Negro students in all the other medical and dental schools in the United States. Howard University and Meharry Medical College have been responsible pioneers in the development of medical education among Negroes and, today, they constitute, by far, the major source of Negro physicians, surgeons, and dentists in America and in the world. The urgent importance of the work of these two institutions is further emphasized by the fact that even now the total annual output of Negro physicians in the United States hardly exceeds the number required to replace those who annually die.

7. From the beginning of our work in 1867, the founders invited to the facilities of the university learned and able men and women, on the basis of their ability and character as individuals and without discrimination as to sex, race, creed, color, or national origin. But it was a major purpose of the founders of Howard University to employ Negro teachers, among others, on every faculty. Today the Negro members of the professional faculties of Howard University, exclusive of the School of Religion, constitute together a group of Negro professional teachers larger by far than all the Negroes so employed in all other American universities combined. The existence of this group of Negro university teachers at Howard University has been a standing inspiration to the Negro people for more than three-quarters of a century, and membership on one of these faculties has been the first employment of many of the outstanding Negroes in the public life of America. From them came the founder and operator of the first blood plasma bank in the world, the most distinguished Negro industrial chemist in America, the first Negro governor of an American possession, the first Negro in the Secretariat of the United Nations (Nobel prize winner), the first Negro member of the bench of the United States Court of Appeals, the first Negro cultural attaché in the diplomatic service of the United States to a major European nation.

8. Service to foreign students and in foreign countries: Howard University has developed a far-reaching service to foreign students. In 1957 it served 489 foreign students from 43 foreign countries in Asia, Africa, Europe, North, Central, and South America, and 13 island possessions of the British and Netherlands Indies, and 4 possessions of the United States. The university ranks second among all American universities in the percentage of foreign students enrolled.

9. Howard University students and teachers have associated daily with teachers and students representative of every race and color and all the major creeds of the world. They have learned by experience that the common country of the trustable human heart crosses and transcends all these boundaries of difference, and they are habituated to a friendly interest in human beings everywhere. In recent years many of these teachers and students, as individuals and in groups, have traveled on governmental missions to many countries in Europe, Asia, and Africa. Wherever they have gone, they have imparted good will and friendship and they have found good will and friendship in return.

10. Again and again the responsible leaders of Government and the friends of our country have acknowledged their services as being of the highest value to their country and to the cause of democracy in the world.

11. During the year 1956–57, the professor and head of the department of classics returned to Howard University from a 2-year period of service as cultural attaché of the United States Embassy in Italy. The University has received a letter from Government officers which speaks of his service in the highest terms of appreciation as follows:

"Prof. Frank M. Snowden leaves Italy shortly to resume his duties at Howard University. During the 2 years that Professor Snowden has served at this post, he proved himself an outstanding member of this mission and has come to be considered as an outstanding and distinguished American by the Italian intellectual, academic, and Government groups with whom he has come in contact. The United States Information Service in Italy has looked upon Professor Snowden's contribution to its program as a personal triumph.

"I do not believe that any one person in the history of USIS operations in Italy has received the acclaim and the attention rendered Professor Snowden. Many more requests than could ever be fulfilled were received by the mission for his appearances before groups in his specialized field of activity. Wherever and whenever he lectured, the audiences—who broke all previous records for numbers—requested his return. His discussions on modern education will have long-term impact on the renovation of the Italian educational system. The modernization of the Italian educational system already is underway due in no little part to Professor Snowden's efforts. We have looked upon Professor Snowden as a medium unto himself, so successful was he in the assignments given him.

"The Italian Government has constantly sought Professor Snowden's advice and counsel in matters pertaining to education, and in recognition of his services are presenting him with the Gold Medal, the highest award offered a foreigner by this country.

"I offer these observations and these highlights regarding Professor Snowden's value to the USIS program in Italy because I am certain you will feel proud to know that a member of your faculty has distinguished himself so well in the service of his country. I wish to thank you for releasing Professor Snowden to handle the important assignment entrusted him these last 2 years."

B. THE SPECIAL RELATIONSHIP OF THE UNITED STATES GOVERNMENT TO HOWARD UNIVERSITY

1. Howard University was chartered by an act of Congress on March 2, 1867. Funds of the Federal Government available through the Freedmen's Bureau were contributed toward the purchase of the first land and the erection of the first building.

2. Almost immediately the institution became associated with the hospital work which the Federal Government was undertaking to do for the emancipated slaves at Freedmen's Hospital and has continued that relationship until this day. The present Freedmen's Hospital stands on valuable grounds owned by Howard University and leased to the Federal Government at the rate of $1 per year. Howard University renders all professional services in this hospital, and the combined work of Howard University and the Freedmen's Hospital constitute the most valuable training facilities for the substantial medical education of Negro physicians and surgeons to be found anywhere in the world.

3. On March 3, 1879, the Congress made the first Government appropriation for the support of the university in the amount of $10,000. Since that time the Congress has made continuous and increasing appropriations to the university, year by year, being more and more confirmed in the conviction that it was thereby rendering a greatly needed service to the colored people in ways not otherwise provided. Until the year 1928, these appropriations were made in the form of voted gratuities, without the support of a substantive law. During this period of 49 years, from March 3, 1879, to December 13, 1928, the current annual appropriations from the Congress to Howard University rose from $10,000 to $218,000, enabling the university to survive as the only one of many heroic endeavors which began in this field after the emancipation.

4. Under date of March 15, 1928, the United States Office of Education called nationwide attention to the necessity of making Howard University into a first-class institution, showing that the possibility of a first-class university available substantially to the Negro people did not exist anywhere else in the United States. At that time there was nowhere in existence in the Southern States a single approximation of a State university available to Negroes and there was nowhere manifest a vigorous will to give adequate support to such an undertaking, either in private philanthropy or in government.

5. On December 13, 1928, both Houses of Congress passed and the President of the United States signed a bill amending the act incorporating Howard University, so as to provide substantive law for annual appropriations thereto, in the following language:

"SECTION 8. Annual appropriations are hereby authorized to aid in the construction, development, improvement, and maintenance of the university, no part of which shall be used for religious instruction" (45 Stat. 1021, approved December 13, 1928).

6. The passage of this substantive law in 1928 was followed by a conference called by Secretary of the Interior, the Honorable Roy O. West, on February 11, 1929, and attended by representatives of all divisions of the Government, including the Bureau of the Budget, the Appropriations Committee of the House of Representatives, the Finance Committee of the Senate, the Department of Interior, and the United States Bureau of Education, together with leaders of philanthropy and the trustees of Howard University. At this conference it was unanimously agreed that the time had come to establish Howard University on a first-class basis and the United States Office of Education was authorized to study and to prepare a plan for the development of the university along these lines.

7. Following this important conference, a study of all aspects of the educational program of Howard University was made by the officers thereof under the supervision of the Office of Education. As a result of this study a definite program to establish Howard University on a first-class basis was worked out in every detail and a formula of financial support based upon the experience of State and Federal Governments with land-grant colleges and universities, was established and agreed upon by the educational leaders in the Office of Education, by the United States Commissioner of Education, by the Secretary of the Interior (the Honorable Ray Lyman Wilbur), and by the Subcommittee on Appropriations of the House of Representatives, dealing with the Interior bill, under the leadership of the Honorable Louis C. Cramton. This bill was commended to the Congress by the action of the entire Appropriations Committee of the House of Representatives.

8. The Congress swiftly and vigorously supported the agreed-upon program. By successive steps it raised the current appropriation from $218,000 in 1928 to $675,000 in 1932, and made substantial appropriations for buildings and physical

plant improvements. Then came the depression years which halted the growth in current appropriations and brought the building program to a stop.

9. Increased appropriations for current support began again, however, after 1941 and steadily rose to $1,115,701 in 1946; thence to $1,588,635 in 1947, and to a peak of $3,800,000 in 1948.

10. Physical plant: The 71st Congress which prepared the first 20-year program for the development of Howard University recognized that the university was in distressing need of a new plant and equipment for the important work which it was undertaking to do. In the 20-year program of development which it approved, therefore, it provided for a rapid development of the physical plant of the university including the acquisition of nearly 460,000 additional square feet of land and more than 30 new buildings, within a period of 10 years. The Congress in sessions between May 7, 1929, and March 4, 1933, appropriated $3,264,000 toward the construction of 8 of these building projects as follows: (1), (2), (3) 3 dormitories for women, (4) an educational classroom building, (5) a heat, light, and power plant, (6) a tunnel for the transmission of heat, light, and power, (7) a chemistry building, (8) a general library building. These buildings were all constructed thereafter and further appropriations of $1,397,700 were made for a ninth building project—a group of men's dormitories—and for landscaping and repair of buildings. The needed land for all these projects was acquired through the gifts of private foundations.

11. After the beginning of the year 1936, however, the appropriations for funds for buildings ceased until after the United States had ended the Second World War.

12. In 1946 and thereafter over 2,600 returning soldiers from this war, being deeply impressed by the advantages which Howard University offered, flooded the 10 schools and colleges and overflowed its buildings to the extent that the Government was constrained to provide Howard University with 13 temporary wooden buildings and to turn over for their use 2 permanent dormitory buildings, originally acquired for the housing of Government employees. During this period the physical plant of the university was placed under the utmost strain; its current budget for maintenance of the plant was exhausted to provide foundations, water, electric, and heating services for the temporary wooden buildings; and the current maintenance of the plant was so far reduced in efficiency that heavy deterioration set in and accumulated rapidly.

13. The Members of Congress were so greatly impressed by the distressing inadequacy of the plant of Howard University in 1946–48, that they determined to give the matter of an adequate plant their most thorough consideration. On June 14, 1948, therefore, they appropriated a sum of $50,000 to provide for a careful restudy of the 20-year plan of 1930 and a considered readaptation of that plan by the Public Buildings Administration to meet the present-day needs of the university. As this study proceeded the Congress made one appropriation after another, designing to bring about an adequate plant at the earliest possible time. Between June 14, 1948, and July 5, 1952, the Congress thus appropriated and authorized funds for 11 major building projects at an authorized cost of $18,439,221 and authorized further the funds for the planning of a new preclinical medical building. This was the first sustained movement toward the provision of an adequate plant for the university since the initial series of appropriations by the Members of Congress in the years 1927 and 1933, immediately succeeding upon their determination upon the 20-year program to make Howard University a first-class institution.

14. To this group Congress in 1954 added an appropriation of $4,436,000 for the construction of the preclinical medical building.

C. THE PRESENT STATUS OF THE UNIVERSITY

1. The student body

1. Howard University is being built to serve 5,200 full-time day students and as many additional evening and summer school students as may be accommodated by the plant to constructed. During the school year 1956–57 the institution served a net total of 5,020 students excluding all duplications, of whom 3,867 were full-time students in the 10 regular schools and colleges. The total enrollment is expected to rise as high as 5,201 in 1958, of whom 4,048 will be full-time students in the 10 regular schools and colleges, and to increase by as much as 10 percent each year thereafter.

2. The physical plant

2. While the project is nearing completion, it is not finished; and the day of increased enrollment, approaching the maximum planned, is already upon us.

3. About two-thirds of the physical plant has been completed. In 1956 the new biology building was finished and occupied. The physical space contemplated for the full enrollment in the physical and biological sciences, was thus completed.

4. The new section of the preclinical medical building is finished and occupied. The related alteration of the old section will be finished and ready for occupancy in 1958. The full space for the preclinical instruction of 1,000 students in dentistry, medicine, and nursing will then be ready.

5. New buildings for instruction in dentistry and pharmacy are already completed. The new teaching hospital for Howard, now being recommended by the President of the United States, points toward the last major item of physical space required to bring the entire program for instruction in medicine, dentistry, pharmacy, and nursing to the stage of complete physical plant readiness.

6. A new building for the general administrative offices is finished and occupied. Plans and specifications are ready for the greatly needed general auditorium building which will also accommodate the school of music and departments of drama and fine arts, and the Bureau of the Budget has given notice of the release of hitherto impounded funds for its erection in 1958.

7. There are still unfinished and urgent physical needs affecting the teaching of other undergraduate and graduate fields; namely, a classroom building for home economics, a new and adequate plant for physical education for men, an additional classroom building for the humanities, social sciences, education and business instruction, a student and faculty union building, and an adequate warehouse. The Congress has appropriated all of the planning money for the home economics building and part of the planning money for the physical education building.

8. All dormitories in the university, both for men and women, are filled; and there is an eager waiting list and a pressing enrollment. The new dormitory for 300 men, provided by the Congress, is under construction and will be ready for occupancy at the beginning of the school year 1958–59. It will relieve this stress, in part, on the men's side; but the relief will not touch the pressure for new dormitories for women and will relieve only in part the need for additional space for men.

9. In brief, if the original plans of the development of this institution are to be completed, a minimum of 3 additional educational buildings, 3 additional service buildings, and 3 additional dormitory buildings must yet be erected. Full planning funds for one of these buildings and partial planning funds for another were made available in 1958. The 1959 budget requests the remainder of the necessary planning funds for this second building. The construction program has not progressed nearly as fast as had originally been planned. It is hoped that planning funds for these long-delayed remaining buildings can be soon made available in order that the necessary physical plant can be completed and put into operation.

3. The quality of instruction

10. At the present time, all the schools and colleges of the university are accredited by their individual national accrediting agencies. In addition thereto on May 9, 1957 the university received notice of full accreditment as an interrelated whole by the Commission on Institutions of Higher Education of the Middle States Association of Colleges and Secondary Schools, with commendatory language as follows:

"This recognition by Howard University's peers in the Middle States community of higher education is well deserved. We appreciate the spirit in which you have cooperated with the commission and achieved the commendable and, in some respects, even remarkable improvements which have been called to our attention."

11. The increased appropriation of $500,000 for salaries and expenses voted by the Congress for 1958 and the expressed purpose by responsible leaders in the Bureau of the Budget and in the Congress to make Howard University a first-class institution in every respect, were decisive in making this notable accreditment possible.

12. I ask the Members of Congress to accept the very great thanks of Howard University for these acts of high consideration and effectiveness. I hope that they will not falter in the great purpose which they have thus so inspiringly reaffirmed, but that they will go on until they have completed the physical plant as planned, and until every area of the educational program of the university is

supported at a level which makes possible first-class competence in instruction and research.

13. The State universities in 12 Southern States have of late, and little by little, opened their doors to Negro students. This is a great beginning, of high significance to the Negro people and to our Nation. In the course of time it will come to have quantitative significance in the training of high-grade professional and graduate leadership for the Negro people, and after the expiration of many years, it will, I am sure, come to have the crowning inspiration of a substantial number of Negro scholars, working in the faculties of these universities, side by side with their brothers of the majority.

14. Until that time comes, however, there is one place in this Nation where the people of the United States have come near to an unequivocal and substantial expression of their highest will toward the Negro minority—that is in the comprehensive undergraduate, graduate, and professional program of Howard University and in substantial representation of Negro personnel on the faculties of that university.

15. Every unfinished element in the life of this project which leaves it short of first-class resourcefulness and functioning should be rapidly overcome without hesitancy in order that the Negro people themselves, the citizens of our country from every State and the diplomatic and cultural representatives of all the peoples of the world may see here on this spot in the National Capital an expression of our American and democratic purpose toward race, color and minority status, so clear, so substantial and so adequate as to be inspiring beyond question. The hour is late, and the world needs this inspiration more than it needs bread.

Statement of Mordecai W. Johnson, President, Howard University

I. 1958 APPROPRIATION DECISIVE IN ACCREDITING HOWARD UNIVERSITY AS A WHOLE

On May 9, 1957, the president of Howard University received a letter from the chairman of the Commission on Institutions of Higher Education of the Middle States Association of Colleges and Secondary Schools announcing the vote of the commission to accredit the work of Howard University, as a whole, with strongly commendatory language as follows:

"This recognition by Howard University's peers in the Middle States community of higher education is well deserved. We appreciate the spirit in which you have cooperated with the commission and achieved the commendable and, in some respects, remarkable improvements which have been called to our attention."

This was the first vote affirming the accreditment of the work of the university as a whole ever taken in its entire history. It represents a crowning high-water mark in the great development of this institution which has been so admirably supported by this committee, and was decisively made possible by the increase of $500,000 in the appropriation for salaries and expenses in 1958 recommended by this committee.

On behalf of the university, I wish to thank the chairman and the members of the committee most warmly.

II. REQUESTED APPROPRIATION SUMMARIZED

The requested appropriation now pending before the committee with the approval of the President of the United States calls for a total sum of $4,334,000 in 3 items, as follows: (1) "Salaries and expenses, $4 million"; (2) "Plans and specifications, $171,000"; and (3) "Construction of buildings (liquidation of contract authorization), $163,000."

III. SALARIES AND EXPENSES

A. Increases requested

1. The requested appropriation of $4 million for "Salaries and expenses" represents an increase of $200,000 over the appropriation of $3,800,000 for the year 1958, in 4 items of 2 activities. Three items in activity 2, "Instruction and departmental research," total $194,104: (*a*) $107,407 to provide 14 additional teachers in medicine and dentistry to serve the scheduled increase of 81 in the enrollment of medicine and dentistry at the existing student-teacher ratio in these colleges; (*b*) $21,697 to provide instructional supplies and equipment for the scheduled increase of 81 in the enrollment of medicine and dentistry; and

(c) $65,000 for merit in the salaries of outstandingly able teachers. (This is the sole item in the appropriation designed to improve the quality of instruction.)

One item in activity 4, "Operation and maintenance of the physical plant, $40,896," to complete the sum of $141,792 required to operate and maintain the total plant and equipment of the new preclinical medical building.

These 4 items represent a total of $235,000. The requested appropriation is $200,000. In addition thereto, the sum of $35,000 will be provided for instruction and departmental research through increased student fees.

B. Justification of increases

(*a*) Activity No. 2. "Resident instruction and departmental research, $194,104."

1. Fourteen additional teachers in medicine and dentistry, $107,407.

(1) The first item of increase requested in "Salaries and expenses" is $107,407 to provide 14 additional teachers in medicine and dentistry, to serve the scheduled increase of 81 in the enrollment of medicine and dentistry.

(2) The completion of the new preclinical medical science building in 1957 permitted the university to begin a 4-year program long ago planned and approved by the Congress of the United States for a practical doubling of the physicians and dentists educated at Howard University. This plan proposed increasing the number of medical students to a net total of 400 and the number of dental and dental hygiene students to a net total of 400. (Sixteen additional students are accepted in anticipation of a 4-percent loss in 4 years.) The first step in these admissions was inaugurated in 1958 with the planned admission of 28 additional medical students and 53 additional dental students. The second step provides for the admission of 28 medical students and 53 additional dental and dental-hygiene students to be accommodated by the preclinical faculty of medicine.

(3) It is our purpose to have these 416 medical and dental students served by a preclinical faculty of 63.8 teachers representing an overall ratio of 1 preclinical teacher for each 6.5 students. In 1956–57, there were 35 preclinical teachers available. The Congress provided 11 additional preclinical teachers in 1958, making a total of 46. The number now required to complete the preclinical staff and to make it efficient according to the above criterion of 1 teacher to 6.5 students is 17.8. It is here proposed that 14 of these 17.8 needed additional teachers now be appointed, leaving a deficiency of 3.8 teachers for the preclinical branches of medicine and dentistry to be appointed at the earliest possible next step.

2. For instructional supplies and equipment, $21,697.

(1) This increased sum of $21,697 is requested to provide instructional supplies and equipment for the scheduled increase of 81 students in medicine and dentistry in 1959.

(2) The universitywide survey of the Middle States Association called attention to the acute shortage of supplies and equipment for the instruction of Howard University and strongly called for improvement in these areas. The United States Office of Education, in a previous survey, had already called serious attention to this shortage and had commented upon it, with strong recommendation that it be remedied.

(3) The Congress, being required to cut the recommended budget last year, was not able to approve the $97,679 recommended by the President for this purpose. The university is still operating, therefore, with an acute and growing need in this area.

(4) The sum of $21,697 is requested not to provide for an improvement in this situation, but solely to provide for the increased enrollment in medicine, on the existing basis. It is urgenly necessary that this sum be provided.

3. For merit increases in the salaries of outstandingly able teachers, $65,000.

(1) It is here respectfully requested that the committee will approve and support the request for $65,000 for merit increases in the salaries of outstandingly able professors and associate professors.

(2) The illuminating report of the National Education Association, based on 1955–56 information, confirms the studies made by the faculties of Howard University; namely, that the median salary for our rank of full professor is $1,760 below the median prevailing in similar complex universities situated in municipalities; that the median for our associate professors is $1,000 below the median in these institutions, while the upper ranges of our salaries in these 2 ranks are very far below those prevailing in all complex universities whatsoever.

(3) If this recommendation is approved, the sum appropriated will be used for merit increases for individuals of outstanding competence and promise and for the development of the upper range of salaries available in the two upper professorial ranks, so as to enable the university to obtain and secure individuals of out-

standing caliber in teaching and research. This will be done in pursuit of an agreed-upon policy of the board of trustees to place the accent on these two areas in the further development of the faculties of the university.

(*b*) Activity No. 4. For the operation and maintenance of the pre-clinical medical plant, $40,896.

1. It is here respectfully requested that the committee will approve the appropriation of $40,896 to supplement $100,896 now available to provide $141,792 needed to operate and maintain the new preclinical physical plant in medicine.

2. The preclinical medical building, provided in the long-range plan for doubling the output of physicians and dentists, is completed and in use in 1958. In part an air-conditioned building with much machinery, it is being maintained and operated with a sum of $100,896, or a cost of 88.8 cents per square foot. The old preclinical building is now being altered so as to be united with the new building in an interrelated single plant. The altered building will be finished during the current year, and beginning July 1, 1958, it will be opened for operation, thus adding 65,750 square feet to the new building, making a total of 179,378 square feet to be maintained. The sum of $40,896 is here requested to provide the maintenance of this additional 65,750 square feet. The entire interrelated plant, representing 179,378 square feet, will then be operated at a cost of $141,792, or 79 cents per square foot—a very low per-square-foot cost.

3. The additional sum of $40,896 here requested to operate and maintain the additional 65,750 square feet will provide for (1) additional personnel and personal services, $27,017.50 including 1 plumber, 1 painter, 1 guard, and 5.2 janitors and laborers; (2) additional fuel and purchased electricity, $11,200; and (3) additional supplies and materials, $2,678.50.

The effect of the House action

1. The House of Representatives voted to approve only $3,900.000 of the requested appropriation of $4 million for "Salaries and expenses." This represents a reduction of $100,000, or one-half of the requested increased of $200,000.

2. If this reduction of $100,000 in the current appropriation for 1959 is allowed to stand, Howard University will be obliged (1) to cut in half the 14 teachers recommended to accommodate the long-planned increase of 81 students in medicine and dentistry; (2) to receive them at the expense of substantially lowered efficiency in the teaching of scientific subjects in the preclinical branches of medicine and dentistry; and (3) to require postponement of approximately one-half of the planned retirement of accumulated deterioration. (4) It will signalize to our accrediting agencies' abandonment for the second successive year of the completed first step in the expressed purpose of the Bureau of the Budget to carry the income of Howard University beyond the median income available in comparable complex institutions, and will (5) constitute a backward step in the expressed purpose of the Congress "to make Howard University a first-class institution in every respect."

(3) The increase of $200,000 included in the appropriation of $4 million recommended by the President represented the very minimum increase in teachers and supplies and expenses required to support the increase of 81 students in medicine and dentistry expected in 1959, in accord with our long-range program. As a matter of fact, the teachers to be required by this full sum left a deficiency of 10.8 teachers required for the efficient operation of the preclinical branches of medicine at the ratio of 1 preclinical teacher for each 6.5 students.

4. The reduction of the appropriation by $100,000 requires Howard University, as a first step, to cut the recommended increase of 14 teachers by half. The result is certain to be injurious. Unless the enrollment in medicine and dentistry falls 114.6 below the enrollment of 684 expected in 1959, the quality of instruction in the preclinical branches of medicine will fall substantially below the quality available in 1958.

5. But, after cutting the recommended increase of 14 teachers in half ($53.704) we must go further and cut by nearly half ($46,296) the $100.000 carried in the recommended appropriation for the reduction of long-accumulated deterioration in the physical plant. This will require that we abandon approximately one-half of the projects of remedy included in our requests for 1959 and will increase the amount of deterioration still to be met in 1960 from $78,591 to $125,887, plus a possible 10 percent or more of further deterioration in these already deteriorated areas.

In short, the enforced saving brought to pass in these two categories by the $100,000 reduction in the appropriation will be had (1) at the expense of a measurable loss of competence in the preclinical branches of medicine and dentistry,

and (2) the further prolongation and expansion of the accumulated deterioration in the physical plant of the university.

6. But, worse than these specific injuries to the efficiency of the teaching program and the physical plant is the fact that this recommended reduction of $100,000 represents the refusal of the House for the second successive year to support the appropriation of $4 million which the Bureau of the Budget declared to be needed in 1958, and even then as only the first step in carrying the appropriation toward the desirable goal of appropriated income of comparable complex institutions (for which the university believes a minimum appropriation of $5,455,000 is required).

7. The School of Medicine of Howard University is operating on a per capita annual support which lies in the lowest quarter of per capita annual support of medicine in the State-supported medical schools of America, and the median of all our teaching salaries in the 2 upper ranks of instruction throughout the university still lies more than $1,000 below the median in comparable institutions, while our maximums are far below the maximums in comparable institutions. To spend over $8 million to prepare the buildings for doubling the output of physicians, surgeons, and dentists, and then to proceed in this extremely restrictive fashion as touching the employment of teachers and the maintenance of the buildings, is not sound economy. It is defeative of the very heart of the purpose for which the large expenditures in buildings were made. I am sure that the Congress does not consciously wish to do this.

It is most earnestly requested and hoped that the Senate will restore the voted reduction of $100,000 made by the House.

IV. FOR PLANS AND SPECIFICATIONS, $171,000

1. The sum of $171,000 here respectfully requested will be required to complete the sum of $251,000 for plans and specifications for the men's physical education building. This building is project No. 56 in the group of buildings recommended for Howard University by the Public Buildings Service in the master plan presented by them after a careful and thoroughgoing survey of the needs of the institution. The Congress approved the undertaking of the project by an appropriation of $80,000 for plans and specifications in 1958. The work of planning is already underway. The additional sum of $171,000 (reduced to $123,000 by the House) here requested will provide for the working drawings of the project and the specifications to the stage of readiness to be placed on the market for bids.

Effect of the House action

1. The reduction of $48,000 in this appropriation by the House of Representatives (to a new total of $123,000) was done on the basis of a revised estimate of cost submitted by the university itself.

V. FOR CONSTRUCTION OF BUILDINGS (LIQUIDATION CONTRACT AUTHORIZATION), $163,000

1. The requested appropriation of $163,000 for construction of buildings is needed to liquidate a yet unfinanced contract authorization on the men's dormitory building. This building is nearing completion. It was determined by the General Services Administration that the sum of $734,800 is the proper escalation on this building. Under the low bid it is now clearly probable that only $163,000 of this amount will be needed. Liquidation is requested to be provided for this limited amount only.

Effect of House action

The House has approved the entire recommended sum of $163,000.

HOWARD UNIVERSITY ACCREDITED

Dr. JOHNSON. I have a very brief statement; rather, a summary of the formal statement. It begins with very good news.

Mr. Chairman and members of the committee, on May 9, 1957, the president of Howard University received a letter from the chairman of the commission on institutions of higher education of the Middle States Association of Colleges and Secondary Schools announcing the vote of the commission to accredit the work of Howard University, as a whole, with strongly commendatory language as follows:

This recognition by Howard University's peers in the Middle States community of higher education is well deserved. We appreciate the spirit in which you have cooperated with the commission and achieved the commendable and, in some respects, remarkable improvements which have been called to our attention.

Senator HILL. We congratulate you, sir.

Dr. JOHNSON. Thank you.

This was the first vote affirming the accreditment of the work of the university as a whole ever taken in its entire history.

It represents a crowning high-water mark in the great development of this institution which has been so admirably supported by this committee, and was decisively made possible by the increase of $500,000 in the appropriation for salaries and expenses in 1958 recommended by this committee.

On behalf of the university, I wish to thank the chairman and the members of the committee most warmly, and, through you, the Senate of the United States.

The requested appropriation now pending before the committee with the approval of the President of the United States calls for a total sum of $4,334,000 in 3 items as follows: (1) Salaries and expenses, $4 million; (2) plans and specifications, $171,000; and (3) construction of buildings—liquidation of contract authorization—$163,000.

SALARIES AND EXPENSES

The requested appropriation of $4 million for salaries and expenses represents an increase of $200,000 over the appropriation of $3.8 million for the year 1958, in 4 items of 2 activities, including first 3 items in activity 2, instruction and departmental research, total $194,104: (*a*) $107,407 to provide 14 additional teachers in medicine and dentistry to serve the scheduled increase of 81 in the enrollment of medicine and dentistry at the existing student-teacher ratio in these colleges; (*b*) $21,697 to provide instructional supplies and equipment for the scheduled increase of 81 in the enrollment of medicine and dentistry; and (*c*) $65,000 for merit in the salaries of outstandingly able teachers. This is the sole item in the appropriation designed to improve the quality of instruction.

The fourth item is in the area of operation and maintenance of the physical plant. It is here recommended that $40,896 be appropriated to operate and maintain 65,750 additional square feet of space in the completed premedical building units, including the provision of $27,000 for 8 9/10 additional personnel, $11,200 for additional fuel and purchased electricity, and $2,678 for additional supplies and materials.

EFFECT OF HOUSE ACTION

The House of Representatives has disallowed $100,000 of the requested increase of $200,000. If this drastic reduction, representing one-half of the recommended increase, is allowed to stand, the university will be obligated first to cut in half the 14 teachers recommended to accommodate the expected and long planned for increase of 81 students in medicine and dentistry, and two, to cut by nearly one-half the $100,000 carried in the recommended appropriation for the reduction of long accumulated deterioration in the physical plant. This means a measurable loss of presently achieved competence in the teaching of scientific subjects of medicine and dentistry and a

further prolongation and expansion of the accumulated deterioration of the physical plant of the university.

There are no alternatives which are less injurious. But worse than these specific injuries to the efficiency of the teaching program and the physical plant is the fact that this recommended reduction of $100,000, if sustained, would represent the refusal of the Congress for the second successive year to support the appropriation of $4 million which the Bureau of the Budget declared to be needed in 1958, and even then as only the first step in carrying the appropriation toward the desirable goal of appropriated income of comparable complex institutions—for which the university believes a minimum appropriation of $5,445,000 is required.

First-class work at Howard University can be achieved only by moving steadily in this direction. It is earnestly requested and hoped that the Senate will restore the $100,000 cut away by the vote of the House.

PLANS AND SPECIFICATIONS

In plans and specifications the requested appropriation of $171,000 was designed to complete the full sum of $251,000 for the plans and specifications for the men's physical education building for which the Congress appropriated $80,000 in 1958.

The House appropriated $123,000, representing a reduction of $48,000 in the sum originally recommended. The reduction of $48,000 represents a recent revision in the estimated cost which was reported to the House committee by the president of the university.

The university does not protest this reduction.

The requested appropriation of $163,000 for the construction of buildings is the amount estimated to be necessary to liquidate contract authority previously granted for the construction of the men's dormitory.

The House has approved the entire amount requested.

RESTORATION REQUESTED

So, Mr. Chairman and members of the committee, Howard University has a single request only; namely, that the $100,000 deleted by the House be restored if it is at all possible to do so.

Senator HILL. The $100,000 was recommended by the Budget Bureau?

Dr. JOHNSON. Yes, sir.

Senator HILL. Are there any questions, Senator?

Senator THYE. The only question that I would have would be how your school would suffer in the event you did not have that $100,000 that you requested granted.

Dr. JOHNSON. It would mean, Senator Thye, that the program which we have long prepared for the practical doubling of the output of physicians and dentists, and on which we have spent over $8 million getting the physical plant ready, would now be crippled by failure to provide the personnel to operate the program.

Senator THYE. I have been on this committee for several years and when we planned the facility we knew that the ultimate would be that you would have to have the teachers and instructors, otherwise the plant would not be used to its full capacity.

Dr. JOHNSON. That is correct, sir.

Senator THYE. Therefore, it is now our responsibility to see that you can make use of your plant in a most efficient way by having a sufficient number of personnel to conduct the classes.

Dr. JOHNSON. That is true, sir.

Senator THYE. Thank you.

Senator HILL. If you didn't get the additional $100,000 it would mean you would have to cut in half the 14 teachers as recommended and then you would have to cut nearly in half the recommended appropriation for the reduction of long accumulated deterioration of the physical plant?

Dr. JOHNSON. That is correct.

Senator HILL. We are certainly very much obliged to you, Doctor. We are always happy to have you here, sir.

Dr. JOHNSON. Thank you.

OFFICE OF EDUCATION

STATEMENTS OF DR. L. G. DERTHICK, COMMISSIONER OF EDUCATION, ACCOMPANIED BY MR. JAMES H. PEARSON, ASSISTANT COMMISSIONER FOR VOCATIONAL EDUCATION; AND MR. JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

"PROMOTION AND FURTHER DEVELOPMENT OF VOCATIONAL EDUCATION

"[Promotion and further development of vocational education:] For carrying out the provisions of section 3 of the Vocational Education Act of 1946, as amended (20 U. S. C., ch. 2; 70 Stat. 1126), and section 202 of said Act (70 Stat. 925), section 4 of the Act of March 10, 1924 (20 U. S. C. 29), section 1 of the Act of March 3, 1931 (20 U. S. C. 30), the Act of March 18, 1950 (20 U. S. C. 31), and section 9 of the Act of August 1, 1956 (70 Stat. 909), including $4,000,000 for extension and improvement of practical nurse training, and $228,000 for vocational education in the fishery trades and industry including distributive occupations therein, $33,750,081: *Provided*, That the apportionment to the States under section 3 (a), (1), (2), (3), and (4) of the Vocational Education Act of 1946 shall be computed on the basis of not to exceed $29,267,081 for the current fiscal year: *Provided further*, That the amount of allotment which States and Territories are not prepared to use may be reapportioned among other States and Territories applying therefor for use in the programs for which the funds were originally apportioned."

Amounts available for obligation

Description	1958 appropriation	1959 estimate	House allowance
Appropriation or estimate (total obligations)	$33,750,081	$33,750,081	$33,750,081

Obligations by activities

Description	1958 appropriation	1959 estimate	House allowance
1. Grants to States and Territories under George-Barden Act	$33,575,081	$33,575,081	$33,575,081
2. Other grants to Territories	175,000	175,000	175,000
Total obligations	33,750,081	33,750,081	33,750,081

Obligations by objects

Object classification	1958 appropriation	1959 budget estimate	House allowance
DIRECT OBLIGATIONS			
11 Grants, subsidies, and contributions	$33,750,081	$33,750,081	$33,750,081

Allotment of funds based on 1958 appropriations and 1959 estimate, George-Barden and supplemental acts

State or Territory	Grand total	George-Barden Title I						Title II practical nurse training
		Total	Agriculture	Home economics	Trades and industry	Distributive occupations	Fishery trades and industry	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Grand total including supplemental acts	$33,750,081							
Grand total	$33,495,081	$29,495,081	$10,241,611	$8,197,416	$8,225,912	$2,602,142	$228,000	$4,000,000
Alabama	934,151	822,159	394,019	246,733	129,935	49,854	1,618	111,992
Arizona	164,144	144,431	40,000	47,831	41,600	15,000		19,713
Arkansas	695,063	611,661	328,089	183,375	68,512	31,092	593	83,402
California	1,555,353	1,373,043	251,722	293,475	618,172	172,373	37,301	182,310
Colorado	276,841	243,594	81,436	70,798	69,784	21,576		33,247
Connecticut	293,016	257,911	40,000	64,327	120,193	32,684	707	35,105
Delaware	159,012	140,586	40,000	40,000	40,000	15,000	5,586	18,426
Florida	507,246	447,684	96,883	137,276	157,115	45,124	11,286	59,562
Georgia	997,345	878,008	394,354	270,295	153,624	56,087	3,648	119,337
Idaho	194,856	171,455	68,266	48,189	40,000	15,000		23,401
Illinois	1,398,330	1,230,563	314,984	280,012	492,341	141,858	1,368	167,767
Indiana	870,497	765,955	273,394	226,118	202,383	64,060		104,542
Iowa	768,558	676,439	322,284	196,453	113,519	42,678	1,505	92,119
Kansas	493,178	433,950	181,625	130,776	90,526	31,023		59,228
Kentucky	949,283	835,280	398,536	266,797	121,997	47,950		114,003
Louisiana	675,879	596,525	232,988	173,754	130,972	43,695	15,116	79,354
Maine	219,867	195,198	53,940	63,343	48,460	15,000	14,455	24,669
Maryland	409,073	361,057	75,604	104,253	133,792	38,151	9,257	48,016
Massachusetts	595,771	526,659	40,000	104,852	285,140	76,375	20,292	69,112
Michigan	1,149,526	1,011,691	286,690	267,936	351,514	103,750	1,801	137,835
Minnesota	780,398	686,775	304,034	194,651	138,706	48,563	821	93,623
Mississippi	886,723	780,758	448,659	225,361	66,881	35,479	4,378	105,965
Missouri	941,409	828,351	354,410	218,219	191,329	64,393		113,058
Montana	179,876	158,274	55,529	47,745	40,000	15,000		21,602
Nebraska	386,896	340,432	160,121	100,885	57,843	21,583		46,464
Nevada	153,426	135,000	40,000	40,000	40,000	15,000		18,426
New Hampshire	153,426	135,000	40,000	40,000	40,000	15,000		18,426
New Jersey	593,511	523,460	49,061	93,073	292,379	78,733	10,214	70,051
New Mexico	179,793	158,201	54,552	48,649	40,000	15,000		21,592
New York	1,909,643	1,681,261	240,888	307,949	882,990	241,477	7,957	228,382
North Carolina	1,349,308	1,188,030	563,003	386,247	166,257	66,139	6,384	161,278
North Dakota	254,690	224,103	103,890	65,213	40,000	15,000		30,587
Ohio	1,436,227	1,263,916	354,674	339,580	438,832	129,393	1,437	172,311
Oklahoma	595,113	523,643	226,373	156,842	104,063	36,365		71,470
Oregon	344,825	303,917	94,294	100,658	79,998	24,772	4,195	40,908

Allotment of funds based on 1958 appropriations and 1959 estimate, George-Barden and supplemental acts—Continued

State or Territory	Grand total	George-Barden Title I						Title II practical nurse training
		Total	Agriculture	Home economics	Trades and industry	Distributive occupations	Fishery trades and industry	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Pennsylvania	$1,721,080	$1,514,566	$291,771	$443,765	$606,611	$170,937	$1,482	$206,514
Rhode Island	165,409	145,843	40,000	40,000	48,358	15,000	2,485	19,566
South Carolina	684,699	602,665	286,932	192,004	87,640	34,471	1,618	82,034
South Dakota	251,286	221,108	103,589	62,519	40,000	15,000		30,178
Tennessee	994,537	875,186	416,363	263,697	140,798	53,598	730	119,351
Texas	1,676,527	1,476,388	531,525	411,957	397,337	125,560	10,009	200,139
Utah	153,426	135,000	40,000	40,000	40,000	15,000		18,426
Vermont	153,426	135,000	40,000	40,000	40,000	15,000		18,426
Virginia	883,824	779,253	299,782	252,147	160,200	54,037	13,087	104,571
Washington	477,998	422,228	114,145	125,574	130,161	38,736	13,612	55,770
West Virginia	554,337	487,764	168,365	187,984	98,759	32,656		66,573
Wisconsin	830,650	731,069	298,706	207,429	167,551	55,924	1,459	99,581
Wyoming	153,426	135,000	40,000	40,000	40,000	15,000		18,426
Alaska	173,855	155,429	40,000	40,000	40,000	15,000	20,429	18,426
District of Columbia	164,481	144,728	40,000	40,000	49,728	15,000		19,753
Hawaii	160,115	141,083	44,441	40,000	40,000	15,000	1,642	19,032
Puerto Rico	838,292	737,801	441,690	188,675	69,912	35,996	1,528	100,491
Virgin Islands	5,460							5,460
Total, Supplemental Acts	255,000							
Guam	80,000							
Hawaii	30,000							
Puerto Rico	105,000							
Virgin Islands	40,000							

PREPARED STATEMENT

Senator HILL. Now, from the Office of Education, we have Dr. Derthick. We are happy to have you here, Doctor. We would be delighted to have you proceed now in your own way, sir.

Dr. DERTHICK. Senator Hill and members of the committee, we are certainly pleased to be back here before you. I thought that I would hit some highlights, and I would like to file a formal statement for the record and perhaps not take the time of the committee to read that statement.

(The statement referred to follows:)

The Vocational Education Act of 1946 (George-Barden Act), title I, authorizes appropriations totaling $29,267,081 for the further development of vocational education in agriculture, distributive occupations, home economics, trades and industries, and an additional $375,000 for the fishery trades and industries and distributive occupations therein. Title II of the act authorizes an appropriation of $5 million for the extension and improvement of practical nurse training. Public Law 896 of the 84th Congress extends the benefits of the George-Barden Act to and authorizes an appropriation of $80,000 for Guam. Supplemental acts authorize appropriations as follows: Hawaii, $30,000; Puerto Rico, $105,000; Virgin Islands, $40,000. The George-Barden and supplementary acts authorize a total appropriation of $34,897,081.

An amount of $33,750,081 is requested for fiscal year 1959 for grants to the States to assist them in meeting the costs of programs of vocational education, the same amount that was appropriated for 1958. Of this amount, $29,267,081 is for allotment to the States in accordance with the terms of the basic George-Barden Act; $228,000 for the fishery trades; $4 million for practical nurse training; $80,000 for Guam; and $175,000 is to continue the full authorization for Hawaii, Puerto Rico, and the Virgin Islands. The Smith-Hughes Act of 1917 provides an appropriation of $7,138,331 which is in addition to the amount requested under the George-Barden and supplementary acts.

The concern for our general welfare and security is focusing attention on the Nation's manpower resources and the number and quality of persons in our present and future labor force. There is an acute awareness of the fact that the work of our engineers and scientists, as well as other professional personnel, must be supported by trained skilled workers and technicians. This is essential if there is to be the best utilization of human resources.

We are in a highly technological age in which there is a great premium on trained manpower. Skills are multiplying and becoming increasingly complex with the result that workers are finding it more difficult to meet the demands made on them. Vocational education is a means of developing the abilities and skills of persons who are entering the labor force and also of retraining those already in the labor force. Programs of vocational education will continue to play an important role in the training of skilled workers and will make valuable contributions to the training of technicians so vitally needed. Therefore, it is more important today than during any period of our history to provide this training.

Shortages of personnel in health services stimulated the provision of funds for practical nurse education. The funds for fiscal years 1957 and 1958 have stimulated an expansion of such education. There has been significant improvement in the quality of the program due to the use of highly qualified personnel and more adequate facilities.

There is need for trained personnel in agriculture, business, and homes as a result of technological, economic, and sociological developments, as well as in the health services. There is continued need also for training personnel in the commercial fishing industry. The response of States in meeting these needs in past years when necessary funds are available demonstrates the value to be derived from continuing the 1958 level of the Federal appropriation.

The high standards in vocational education that have been developed since the passage of the Smith-Hughes Act in 1917 must be maintained and the training programs further developed and improved.

Dr. DERTHICK. In the first place I call attention to the House action on our vocational education proposal. The House gave us that for which we asked, which would enable us to carry on vocational education without any restriction.

If there are any questions, I would be glad to try to answer them.

Senator HILL. I would like to ask you about practical nurse training program, Doctor. You did not use all the funds that we gave you.

Dr. DERTHICK. That is right.

Senator HILL. I would like to know what the difficulties were there and why the program did not go forward more fully.

USE OF STATE ENTITLEMENTS

I shall place in the record this table titled "Use of State Entitlements Under the George-Barden Act, 1957."

(The table referred to follows:)

Use of State entitlements under the George-Barden Act, 1957

[Plus (+) indicates use of amount in excess of entitlement; minus (−) indicates amount of entitlement unused]

Item	Agriculture	Distributive occupations	Home economics	Trades and industry	Practical nursing
(1)	(2)	(3)	(4)	(5)	(6)
Total entitlement	$10,241,611.00	$2,602,142.00	$8,197,416.00	$8,225,912.00	$2,000,000.00
Certified allotment	10,241,611.00	2,602,142.00	8,197,416.00	8,225,912.00	1,428,123.36
Amount unallotted	0	0	0	0	571,876.64
Allotment unused	87,106.55	166,171.24	23,669.00	27,056.09	633,003.84
Unused balance	−87,106.55	−166,171.24	−23,669.00	−27,056.09	−1,204,880.48
Alabama	+12,347.88	+4,251.20	+221.23	+602.88	−46,335.73
Arizona	+1,253.53		+42.89	+193.02	
Arkansas	+10,281.74		+164.42	+317.88	−17,599.59
California	+7,888.53		+263.14	+2,868.21	−15,000.00
Colorado	+2,552.06		+63.48	+323.79	−5,813.14
Connecticut	+1,253.53	−9,891.06	+57.68	+557.67	−12,117.70
Delaware				+185.59	−5,387.50
Florida	+3,036.15	+3,847.86	+123.09	+711.63	
Georgia	+12,358.37		+242.36	+712.79	−48,437.90
Idaho	+2,139.34	−996.00	+43.21	+185.59	−6,013.90
Illinois	+9,871.06	+10,287.69	+251.07	+2,284.37	−63,054.03
Indiana	+8,567.70	−6,914.53	+202.75	+939.02	−52,030.00
Iowa	+10,099.82	+3,639.28	+176.15	+526.71	−42,688.84
Kansas	+5,691.81	+2,645.42	+117.26	+420.02	+7,423.00
Kentucky	−8,079.86	−2,724.46	−4,127.21	−1,186.68	−24,675.26
Louisiana	+7,301.44	+3,726.01	+155.79	+607.69	−39,494.00
Maine	+1,690.39	−11,735.02	+56.80	−2,995.24	−11,682.70
Maryland	+2,331.36		+93.48	−16,365.62	−23,897.00
Massachusetts	+1,253.53				−17,198.00
Michigan	+8,984,37	+8,847.08	+240.24	+1,630.96	−49,227.26
Minnesota	+9,527.90	+4,135.84	+169.26	+638.29	−39,627.34
Mississippi	+14,060.20	+301.62	+202.07	+310.32	−41,714.37
Missouri	+11,106.60		+195.66	+887.73	−28,289.00
Montana	+1,740.18	+1,279.10	+42.81	+185.59	−4,242.19
Nebraska	+5,017.92	+1,840.45	+90.46		−22,688.24
Nevada	−1,103.60	−542.23	+35.87		
New Hampshire	−110.84	−6,731.62	−.65	−2,661.50	−10,000.00
New Jersey	+1,537.49	−21,241.13	+83.45	+1,356.59	−1,606.78
New Mexico	+1,709.57	+1,279.10	+43.62	+185.59	+5,947.14
New York	+7,549.01			+4,096.91	−19,364.54
North Carolina				+771.40	−62,244.92
North Dakota	+3,255.73		+58,47	+185.59	−12,803.32
Ohio	−690.14	−17,180.74	−14,686.30		−57,126.91
Oklahoma	+7,094.14	+3,100.95	+140.63	+482.83	−23,339.50
Oregon	+2,955.01	+2,112.38	+90.25	+371.18	−14,395.77
Pennsylvania	+9,143.60	−84,110.63	+397.90	+2,814.57	−81,048.58
Rhode Island	−22,477.55	−13,206.18	+35.87	+224.37	−2,500.00
South Carolina					−34,177.18
South Dakota	+3,217.85	+1,274.97	+49.70	+171.74	−15,019.00
Tennessee		−13,793.50			−41,690.00
Texas					−92,542.60
Utah				+185.59	−1,250.00
Vermont	−341.72	−288.55	−147.09	−66.32	−10,000.00
Virginia	+9,394.65	+4,607.90	+226.08	+743.30	−41,140.78
Washington	+3,577.11	+3,303.14	+112.59	+603.92	+12,248.02
West Virginia		−4,275.16			−11,922.59
Wisconsin	+9,360.93	−12,746.44	+185.99	+777.41	−5,245.28
Wyoming	+1,253.53		+35.87	+185.59	−8,524.00
Alaska	−38,980.98	−13,980.98	−9,660.25	−32,767.76	−10,000.00
District of Columbia	−40,000.00	+1,279.10	+35.87	+230.73	−10,000.00
Hawaii	+1,392.70	+1,279.10	+35.87	+185.59	
Puerto Rico	−187,118.59	−8,851.20	+169.17	+324.38	−42,343.20
Virgin Islands					−5,000.00

Source: U. S. Department of Health, Education, and Welfare, Office of Education, Division of Vocational Education, Washington, D. C.

EXPLANATION OF DELAY

Dr. DERTHICK. We have our reasons which we would be glad to supply, Senator Hill, and I am going to ask Mr. Pearson to answer that.

Mr. PEARSON. Senator, in getting appropriations as we did in August 1957, where it was found necessary to write new State plans, for the States to get matching money and to get their personnel of the quality that is required to do that job, there was a delay longer than we thought.

We actually felt that some of the States would be able to get the program underway much more rapidly than they did when we asked for the $2 million in 1957. That was basically the reason why we did not utilize the full amount.

Senator HILL. Do you think the situation now has been brought up to date in such a way that you will not have this lag for this coming fiscal year?

Mr. PEARSON. We will still have some unexpended money this year. We do have a situation now that is very much better than it was a year ago, in that 46 of the States have approved State plans. They have had considerable experience in their program.

About 40 States have employed highly qualified supervisors who are registered nurses and we think that considerable progress in terms of quality is being made in the program. However, this year we will still have some unexpended balance in the practical nurse training program for 1958.

SITUATION IN ALABAMA

Senator HILL. I know that my State of Alabama, which happens to be the first on the list, had available some $55,000, but used only $9,400. Do you know what the situation is there today?

Mr. PEARSON. No, I would not know exactly what the situation is there. I think one contributing factor was that Alabama had considerable Kellogg Foundation funds in the promotion of their practical nurse training program and they had developed a program using that fund and I don't know exactly why they were not able to use the full amount of money that was available to them.

Senator HILL. However, you do think that the situation in the several States is such now that the program will go forward much more fully this coming fiscal year than it did this year?

Mr. PEARSON. Yes, sir; I think that is true. We started out with the idea that it was the intent of this law that we would increase the number of people in the nursing field. The first year there were over 7,000 additional people trained and this year there will be considerably more people trained and we think real progress is being made in the program.

Senator HILL. In other words, you think there has been definite progress in the program?

Mr. PEARSON. Yes, and I think that progress, Senator, is in the field of quality of the program. Emphasis has been made on the selection of people to go into training.

We feel that when selection is effective more of the people will stay in the program and complete the training. We also are working in the office on a document on curriculum development. We think when we have that out next year there will be considerable quality in the program as a result of that assistance we will give the States.

Senator Hill, have you any question on this particular item, Senator Thye?

VARIATION BETWEEN STATES

Senator THYE. I note here that there is such a variation in the sums that are to be found in this schedule listing the various States.

In practical nursing under item 6 of the chart laid before me there is quite a variation between the States. For instance, I note here in Minnesota there was $72,000 allotted, of which the State used approximately $32,000.

Then I note up here for the State of Illinois, $63,000, and Indiana, $52,000, unused as listed on this chart. It was a question that the States were not able to make use of all the money that you had set aside for them.

Mr. PEARSON. That is right.

Senator THYE. And the reason for it was that they had not organized a program?

Mr. PEARSON. I think one of the things, Senator, is the fact that it takes considerable time to work out an arrangement with a hospital for this program. The school authorities have to locate a hospital that has the facilities, the personnel, and is willing to cooperate on this program. It takes a lot of time to work out an agreement with the hospitals.

I think that was one of the reasons, in addition to what I said a while ago, it was not possible for some of the States to get their program underway last fiscal year.

Dr. DERTHICK. You could sum it up, couldn't you, Mr. Pearson, by saying in starting a new program you first have a problem of finding the trained personnel, recruiting personnel, and maybe a month or two or three will go by when they cannot spend money because they have not found and employed the personnel. While that process is going on, you have to make contacts with hospitals and training stations and work out agreements with them. And then, in some instances, I believe, States were not in a position at the outset to match this money. Therefore, you have to give them time to match it.

In the previous period of the program many of those problems have been worked out, so we feel that the program will be greatly accelerated in another year.

Senator THYE. I note here, for instance, a State such as Mississippi. Mississippi actually did not spend $41,714 of her allotment.

What is the explanation there?

Dr. DERTHICK. I don't know about Mississippi, but I presume that in Mississippi maybe their matching funds were not readily available to get started sooner.

Senator THYE. The only reason I singled out Mississippi was that it is right next to Minnesota on the chart. It was just standing out in front of me there.

Thank you, Mr. Chairman.

APPROPRIATION ESTIMATE

"*Further Endowment of Colleges of Agriculture and the Mechanic Arts*

"[Further endowment of colleges of agriculture and the mechanic arts:] For carrying out the provisions of section 22 of the Act of June 29, 1935, as amended (7 U. S. C. 329), $2,501,500."

Amounts available for obligation

Description	1958 appropriation	1959 estimate	House allowance
Appropriation or estimate (total obligations)	$2, 501, 500	$2, 501, 500	$2, 501, 500

Obligations by activities

Description	1958 appropriation	1959 estimate	House allowance
Grants to States (total obligations)	$2, 501, 500	$2, 501, 500	$2, 501, 500

Obligations by objects

Object classification	1958 appropriation	1959 budget estimate	House allowance
Direct obligations: 11 Grants, subsidies, and contributions	$2, 501, 500	$2, 501, 500	$2, 501, 500

Allotment of funds to States and Territories for land-grant colleges and universities (colleges of agriculture and mechanic arts)

State or Territory	Total	Morrill-Nelson funds [1]	Bankhead-Jones funds [2]		
			Total	Uniform grants	Variable grants [3]
Total	$5,051,500.00	$2,550,000	$2,501,500.00	$1,000,000	$1,501,500.00
Alabama [4]	100,541.43	50,000	50,541.43	20,000	30,541.43
Alaska	71,283.24	50,000	21,283.24	20,000	1,283.24
Arizona	77,477.26	50,000	27,477.26	20,000	7,477.26
Arkansas [4]	89,047.71	50,000	39,047.71	20,000	19,047.71
California	175,599.47	50,000	125,599.47	20,000	105,599.47
Colorado	83,218.00	50,000	33,218.00	20,000	13,218.00
Connecticut	90,022.98	50,000	40,022.98	20,000	20,022.98
Delaware [4]	73,172.96	50,000	23,172.96	20,000	3,172.96
Florida [4]	97,644.26	50,000	47,644.26	20,000	27,644.26
Georgia [4]	104,360.28	50,000	54,360.28	20,000	34,360.28
Hawaii	74,985.53	50,000	24,985.53	20,000	4,985.53
Idaho	75,871.76	50,000	25,871.76	20,000	5,871.76
Illinois	156,905.51	50,000	106,905.51	20,000	86,905.51
Indiana	109,244.59	50,000	59,244.59	20,000	39,244.59
Iowa	96,145.67	50,000	46,145.67	20,000	26,145.67
Kansas	89,005.70	50,000	39,005.70	20,000	19,005.70
Kentucky [4]	99,374.97	50,000	49,374.97	20,000	29,374.97
Louisiana [4]	96,768.55	50,000	46,768.55	20,000	26,768.55
Maine	79,115.06	50,000	29,115.06	20,000	9,115.06
Maryland [4]	93,371.85	50,000	43,371.85	20,000	23,371.85
Massachusetts	116,788.72	50,000	66,788.72	20,000	46,788.72
Michigan	133,559.50	50,000	83,559.50	20,000	63,559.50
Minnesota	99,750.80	50,000	49,750.80	20,000	29,750.80
Mississippi [4]	91,735.06	50,000	41,735.06	20,000	21,735.06
Missouri [4]	109,448.37	50,000	59,448.37	20,000	39,448.37
Montana	75,895.57	50,000	25,895.57	20,000	5,895.57
Nebraska	83,222.20	50,000	33,222.20	20,000	13,222.20
Nevada	71,596.86	50,000	21,596.86	20,000	1,596.86
New Hampshire	75,319.18	50,000	25,319.18	20,000	5,319.18
New Jersey	118,233.27	50,000	68,233.27	20,000	48,233.27
New Mexico	76,794.96	50,000	26,794.96	20,000	6,794.96
New York	217,933.81	50,000	167,933.81	20,000	147,933.81
North Carolina [4]	110,518.47	50,000	60,518.47	20,000	40,518.47
North Dakota	76,180.98	50,000	26,180.98	20,000	6,180.98
Ohio	149,269.02	50,000	99,269.02	20,000	79,269.02
Oklahoma [4]	92,278.07	50,000	42,278.07	20,000	22,278.07
Oregon	85,175.65	50,000	35,175.65	20,000	15,175.65
Pennsylvania	174,719.55	50,000	124,719.55	20,000	104,719.55
Puerto Rico	50,000.00	50,000			
Rhode Island	77,899.30	50,000	27,899.30	20,000	7,899.30
South Carolina [4]	91,117.72	50,000	41,117.72	20,000	21,117.72
South Dakota	76,511.20	50,000	26,511.20	20,000	6,511.20
Tennessee [4]	102,835.48	50,000	52,835.48	20,000	32,835.48
Texas [4]	146,920.54	50,000	96,920.54	20,000	76,920.54
Utah	76,871.52	50,000	26,871.52	20,000	6,871.52
Vermont	73,768.09	50,000	23,768.09	20,000	3,768.09
Virginia [4]	103,104.43	50,000	53,104.43	20,000	33,104.43
Washington	93,730.58	50,000	43,730.58	20,000	23,730.58
West Virginia [4]	90,005.74	50,000	40,005.74	20,000	20,005.74
Wisconsin	104,260.50	50,000	54,260.50	20,000	34,260.50
Wyoming	72,898.08	50,000	22,898.08	20,000	2,898.08

[1] Continuing appropriation: Act approved Aug. 30, 1890, as amended, and act approved Mar. 4, 1907.
[2] Authorized appropriation: Act approved June 29, 1935, as amended June 12, 1952.
[3] Based upon the United States census of population, 1950.
[4] The land-grant college for Negroes in this State receives a stipulated proportion of funds.

Senator HILL. All right, Doctor.

Dr. DERTHICK. Then, Mr. Chairman, the action of the House was to sustain our request for appropriation for the land-grant colleges.

Senator HILL. They gave you the full amount you requested?

Dr. DERTHICK. That is right.

APPROPRIATION ESTIMATE

"*GRANTS FOR LIBRARY SERVICES*

"[Grants for library services:] For grants to the States pursuant to the Act of June 19, 1956, as amended (70 Stat. 293–296,911), [$5,000,000] *$3,000,000: Provided,* That the amount of any State's allotment from this appropriation which such State certifies will remain unpaid to it on June 30, [1959] *1960,* may be re-

allotted by the Commissioner among other States applying therefor in proportion to their rural population, and deemed part of such allotments, except that no State's allotment shall be so increased as to exceed the allotment which would be made to it were this appropriation equal to the maximum authorized under this Act."

Summary of changes

1958 actual appropriation	$5,000,000
1959 appropriation request	3,000,000
Net change requested	−2,000,000

	1959 estimate	House allowance
For program items: Grants to States and Territories	−$2,000,000	

Amounts available for obligation

Description	1958 appropriation	1959 estimate	House allowance
Appropriation or estimate (total obligations)	$5,000,000	$3,000,000	$5,000,000

Obligations by activities

Description	1958 appropriation	1959 estimate	House allowance
Grants to States and Territories (total obligations)	$5,000,000	$3,000,000	$5,000,000

Obligations by objects

Object classification	1958 appropriation	1959 budget estimate	House allowance
DIRECT OBLIGATIONS			
11 Grants, subsidies and contributions	$5,000,000	$3,000,000	$5,000,000

EFFECT OF HOUSE ACTION

Activity 1. Grants, subsidies, and contributions

The House allowed $5 million for grants to States to promote the further extension of public library services to rural areas without such services or with inadequate services, an increase of $2 million over the budget estimate. The allowance provides the same amount which is available in the current year and will permit continuation of the program at the same level.

STATEMENT BY COMMISSIONER OF EDUCATION

The Library Services Act, Public Law 597 of the 84th Congress, authorized an annual appropriation of $7,500,000 for grants to States for a period of 5 years beginning with fiscal year 1957. Public Law 896 of the 84th Congress amended the act by including Guam in its benefits.

The purpose of the act is to remedy a serious deficiency in our educational facilities by assisting the several States to promote the further extension of public library services to rural areas without such services or with inadequate services. The States match the Federal funds on the basis of their economic ability as measured by per capita income.

This 5-year program, now in its second year, has stimulated the States to strengthen their State library agencies, to extend bookmobile and reference service to hitherto unserved or inadequately served rural areas, and to encourage small community libraries to form voluntary federations in the interest of economical and better service.

EFFECT OF HOUSE ACTION

The House allowed $5 million for grants to States to promote the further extension of public library services to rural areas without such services or with inadequate services. This is an increase of $2 million over the budget estimate. Under the allowance provided by the House, each State will receive the same allotment as in 1958 and it is anticipated that the States will be able to utilize these funds to carry forward this program at the level achieved during the current year.

Allotments to States according to the terms of the Library Services Act (Public Law 597, 84th Cong., 2d sess.), under $2,050,000 appropriation for fiscal 1957, under $5,000,000 appropriation for fiscal 1958, and under $5,000,000 appropriation allowed by House for fiscal year 1959

States and outlying parts	1957 appropriation		1958 appropriation and 1959 House allowance	
	Total Federal allotment	Matching expenditure from State and local sources	Total Federal allotment	Matching expenditure from State and local sources
(1)	(2)	(3)	(4)	(5)
United States and outlying parts	$2,050,000	$1,909,558	$5,000,000	$4,569,302
Alabama	40,000	20,606	130,565	67,261
Arizona	40,000	31,788	57,556	45,739
Arkansas	40,000	20,606	107,309	55,280
California	40,000	63,654	147,722	235,077
Colorado	40,000	36,923	65,987	60,911
Connecticut	40,000	81,212	63,612	129,152
Delaware	40,000	81,212	46,261	93,924
Florida	40,000	31,788	90,388	71,830
Georgia	40,000	21,652	139,213	75,357
Idaho	40,000	27,363	57,688	39,463
Illinois	40,000	62,828	142,780	224,264
Indiana	40,000	43,195	122,998	132,821
Iowa	40,000	31,865	112,109	89,309
Kansas	40,000	34,115	88,002	75,055
Kentucky	40,000	20,606	137,929	72,650
Louisiana	40,000	22,804	103,777	59,164
Maine	40,000	28,481	63,250	45,036
Maryland	40,000	48,554	78,267	95,005
Massachusetts	40,000	50,273	78,487	98,645
Michigan	40,000	55,034	138,347	190,346
Minnesota	40,000	34,308	111,448	95,589
Mississippi	40,000	20,606	122,720	63,219
Missouri	40,000	37,595	120,099	112,877
Montana	40,000	39,428	57,525	56,703
Nebraska	40,000	31,544	77,030	60,745
Nevada	40,000	79,190	43,603	86,323
New Hampshire	40,000	33,543	51,917	43,536
New Jersey	40,000	66,895	74,163	124,028
New Mexico	40,000	25,671	57,857	37,131
New York	40,000	62,119	153,034	237,658
North Carolina	40,000	20,606	181,775	93,642
North Dakota	40,000	21,652	63,937	34,610
Ohio	40,000	50,724	164,645	208,784
Oklahoma	40,000	27,579	97,570	67,272
Oregon	40,000	40,048	76,947	77,039
Pennsylvania	40,000	43,091	202,887	218,565
Rhode Island	40,000	45,251	46,562	52,675
South Carolina	40,000	20,606	110,476	56,912
South Dakota	40,000	22,725	62,948	35,763
Tennessee	40,000	20,615	136,791	70,499
Texas	40,000	31,225	191,212	149,265
Utah	40,000	29,469	52,579	38,736
Vermont	40,000	27,579	52,638	36,293
Virginia	40,000	28,540	132,552	94,576
Washington	40,000	48,496	86,093	104,378
West Virginia	40,000	21,520	109,000	58,641
Wisconsin	40,000	37,882	116,138	109,987
Wyoming	40,000	40,128	47,679	47,832
Alaska	40,000	20,606	44,967	23,165
Guam			12,970	6,682
Hawaii	40,000	40,000	48,154	48,154
Puerto Rico	40,000	20,606	109,254	56,282
Virgin Islands	10,000	5,152	10,583	5,452

Dr. DERTHICK. With respect to library services, the administration recommended $3 million; and the House, as was the case last year, recommended an appropriation of $5 million, which would, of course, enable us to carry on the program at the present level.

Senator HILL. If the budget recommended were carried out, then you would have to reduce your present program as carried out in the different States; is that not true?

Dr. DERTHICK. There would have to be curtailments.

Senator HILL. The House acted with wisdom I think.

Dr. DERTHICK. We shall do our best to live up to our responsibilities.

LIBRARY SERVICES PROGRAM

Chairman HAYDEN. Mr. Chairman, I have a letter from Mrs Alice B. Good, director of the department of library and archives of my State, in which she tells of the immense value of this program. I offer her letter for inclusion in the record of the hearings.

Senator HILL. We are happy to have this communication from your director attesting to the value of this program and to the need for continued financial support without reduction. As you ask, it will be placed in the record.

(The letter referred to follows:)

DEPARTMENT OF LIBRARY AND ARCHIVES,
Phoenix, Ariz., February 5, 1958.

Hon. CARL HAYDEN,
United States Senate, Washington, D. C.

DEAR SENATOR HAYDEN: Knowing your interest in all that concerns Arizona, and believing you will be very much interested in our library extension service, a service you have had an important part in making possible, I am sending you a few of the publications of the service and pictures that have been taken at bookmobile stops.

The extension service program has gone forward at a rate far exceeding our expectations. People in the outlying areas and small communities are hungry for worthwhile reading material, information, and books. Thanks to the efforts of our Members in Congress, State legislators, and interested people, we are now able to supply books and other material.

In working on the program and with people in the communities, we find a very definite interest in the establishment of libraries and depositories. We believe that this interest will continue through the period of library service demonstration, and that we will have permanently established libraries and service in all areas of the State.

We truly hope that the Federal appropriation for the next few years will be continued at at least the amount of last year's appropriation.

With kindest regards and best wishes, I am

Sincerely yours,

/s/ Mrs. ALICE B. GOOD.

LIBRARY SERVICES PROGRAM

Senator HILL. The committee has a letter from Senator Anderson, of New Mexico, enclosing copy of a communication he had received from the executive secretary of the State Library Commission of New Mexico, and I shall place these communications in the hearings.

(The material referred to follows:)

UNITED STATES SENATE,
COMMITTEE ON FINANCE,
February 21, 1958.

Hon. CARL HAYDEN,
Chairman, Appropriations Committee,
United States Senate, Washington, D. C.

DEAR SENATOR HAYDEN: I enclose copy of a letter I have received from Mrs. Irene S. Peck, executive secretary, State library commission, Santa Fe, N. Mex., in which she discusses the program under the Library Services Act and urges the full appropriation authorized by the act.

I am sure Mrs. Peck's letter will be of interest to you and members of your committee, and I urge your earnest consideration of her argument in behalf of the full appropriation authorized by the act.

Sincerely yours,

CLINTON P. ANDERSON.

NEW MEXICO STATE LIBRARY COMMISSION,
STATE LIBRARY EXTENSION SERVICE,
Santa Fe, N. Mex., February 13, 1958.

Hon. CLINTON P. ANDERSON,
United States Senate, Washington, D. C.

DEAR SENATOR ANDERSON: New Mexico people, lay and professional, who work for more and better library services to our citizens, are deeply concerned over the President's recommendation that only $3 million be budgeted in 1958–59 for the vast national library extension program being carried on under the Library Services Act.

With a nationwide acknowledgment of the urgent need for better education of our people it is ironic, indeed, that books and library services are not recognized as the very foundation stone of education, formal and informal. Some of our top scientists are quoted as saying that this country does not have the libraries necessary for the stepped-up educational programs now proposed.

The $7,500,000 authorized by the Library Services Act was the minimum with which experts felt the job of library extension to unserved areas could be accomplished, but only $5 million was appropriated by the Congress for fiscal 1958. Even with this amount and the consequent cutting of the States' original plans, there have been amazing accomplishments in the 48 States and Territories (out of a potential of 53) now carrying out plans approved under the Library Services Act. It will be impossible, however, to achieve the goal of library service to the 27 million people in America who are now without such service unless the 1958–59 budget is increased.

In New Mexico, with the State and Federal money available, we have set up 3 regional library programs covering 16 counties, each region with its bookmobile (see enclosed New Mexico Library Bulletin). The northern region was the first to be established and began service to the four counties, Taos, Rio Arriba, Torrance, Santa Fe, in mid-August. In the brief period, August 12 to January 31, the rural residents of these counties have borrowed 29,693 books. This is an astonishing record among people who formerly have had few, if any books, and eloquent proof of the need.

The human interest stories are many. Eager, book-hungry children take books for themselves and through them we are reaching the adults in their families. There is a cowboy who drives 30 miles to meet the bookmobile at Moriarty. Someone from Dulce travels the abominable road to Chama every 2 weeks to take back a box of books for 35 readers there.

One of the bookmobile stops is at San Juan Pueblo, where they borrowed 946 books in the month of January. Supervisors of education in the Pueblos feel that books can play a most important part in the cultural integration of the Indians. Unfortunately, it is impossible to extend this service to other Pueblos without more staff, more books, and another bookmobile for which we must have more money.

We have planned to start the fourth regional program in the northeastern section of the State in 1958–59, covering Union, Colfax, Mora, Harding, and San Miguel Counties. There is not a single public library in Mora and Harding Counties. Prominent businessmen in two towns, Clayton and Springer, have asked that the regional library center be located there, have promised quarters for the center and full cooperation with the program. They consider this service a part of their community-betterment programs. We will not be able to start the region at all if our funds are cut.

This library (State library extension service) serves a central reservoir of books upon which all the regions may draw. We are already, even in this short time, feeling the impact of the increased demands made on this library as the bookmobile librarians get to know the interests and needs of their rural borrowers, many of whom have not previously known that books and materials to help them with their special problems exist.

New Mexico received $57,857 in Federal funds in fiscal 1958, matched by $37,131 in State moneys. If the Congress cuts the general appropriations from $5 million to $3 million we will receive only $45,709 in Federal money, and State funds will be reduced proportionately. The inevitable result of this will be curtailment of the services so well begun and will make impossible the establishment of regional programs in the other 16 counties of the State.

If the plan for New Mexico is to be realized, we must have the full appropriation authorized by the act; i. e., $7,500,000, which would give New Mexico $73,038 in Federal funds. Our State legislature already has granted the $47,000 with which to match this sum.

We earnestly request your support for the full $7,500,000 authorized under the Library Services Act when the bill reaches the Senate.

Sincerely yours,

IRENE S. PECK,
Executive Secretary, State Library Commission.

RESOLUTION ON LIBRARY SERVICE ACT

Senator HILL. The committee has received from the executive secretary, David H. Clift, of the American Library Association, a copy of a resolution on the Library Service Act, which I shall place in the record at this point.

(The resolution referred to follows:)

RESOLUTION OF THE AMERICAN LIBRARY ASSOCIATION ON THE LIBRARY SERVICES ACT

Whereas a strong and well-rounded program of educational and informational services is indispensable for the preservation and progress of our democratic society, and the free public library is an essential and integral part of that educational program;

Whereas our free public libraries permit each person to continue his self-education throughout his lifetime, thus assisting him to develop to his full potential as a mature citizen and individual;

Whereas the lack of good library service in our rural areas has deprived more than 27 million Americans of the advantages of ready access to good books and other informational materials essential to the development of people, our greatest national resource;

Whereas the Library Services Act was passed by the 84th Congress for the express purpose of aiding the States in extending and developing public library services in rural areas without such service or with inadequate service;

Whereas this act authorizes an annual appropriation of $7,500,000 for a 5-year period to be used for grants to the States for improving rural library service, and this modest amount is the minimum for accomplishing the established goals;

Whereas the amount received in the first year of the act was only $2,050,000 and for the second year only $5 million, and the President's budget for 1958–59 recommends only $3 million for this purpose;

Whereas 45 States and 4 Territories have initiated programs through the stimulus of these limited Federal grants and have made definite progress in extending library service to their rural inhabitants;

Whereas this reduced appropriation would not only seriously hamper the ultimate attainment of the purpose of the act, but also cause immediate retrenchment in present operating plans and programs of the States and Territories;

Whereas the appropriation of the full $7,500,000 authorized under the act would enable the States to progress toward the goal of bringing library service to all the people of these United States: Therefore be it

Resolved, That the members of the American Library Association at their annual midwinter meeting at Chicago, on January 30, 1958, recommend to the 85th Congress, sitting in its 2d session, that it appropriate for fiscal 1958–59 the full $7,500,000 authorized by the Library Services Act; and be it further

Resolved, That copies of this resolution be sent to the President of the United States, to all Members of the Congress, to the Secretary of the Department of Health, Education, and Welfare, and to the United States Commissioner of Education.

Adopted by the Council of the American Library Association, January 30, 1958.

LETTER FROM SENATOR LONG

Senator HILL. The committee has received a letter from Senator Long of Louisiana, together with a letter to him from a representative of the Louisiana Library Association of Baton Rouge, urging the appropriation of the full authorization, $7,500,000, for the library services program. The letters will be placed in the record.

(The letters referred to follow:)

UNITED STATES SENATE,
Washington. D. C., April 11, 1958.

Hon. CARL HAYDEN,
United States Senate.

DEAR SENATOR HAYDEN: Herewith a letter which I have received from the Louisiana Library Association expressing their interest in a more adequate appropriation for State library services.

With all good wishes, I am,

Sincerely yours,

RUSSELL LONG.

LOUISIANA LIBRARY ASSOCIATION,
Baton Rouge, La., April 9, 1958.

Hon. RUSSELL B. LONG,
Senate Office Building, Washington, D. C.

DEAR SENATOR LONG: We were pleased to have the news that the House on March 27 voted an appropriation of $5 million for grants to the States under the Library Services Act program. This is an increase of $2 million over the amount requested in the President's budget, and the same amount as was appropriated for 1958. We were impressed with and gratified by the following statement in the report which accompanied the bill:

"This committee recommended the appropriation of $5 million (for 1958), which was approved by the Congress. These funds are being fully utilized, and the effective and much-needed program envisioned by the basic legislation is now in being. No reasons for seeking to cut this program back in fiscal 1959 were presented to the committee except the catchall that it is in conformity with the overall budget policy."

We have high hopes that the Senate Appropriations Committee will vote to make the full authorization of $7,500,000 available. We know that you, as a long-time supporter of this vitally important legislation, will do all that you can to see that the intent of the act is carried out.

With very limited funds, the States have done much to stimulate better local support of library service.

We are grateful to you for your continuing help in this program, which will do much to assure us of a better-read, better-informed America.

Sincerely yours,

SALLIE FARRELL,
Chairman, Federal Relations Committee.

LETTER FROM SENATOR FULBRIGHT

Senator HILL. The committee has received from Senator Fulbright, of Arkansas, a letter to him from the North Arkansas Regional Library, urging approval of not less than $5 million for grants for library services. The letter will be placed in the record.

(The letter referred to follows:)

North Arkansas Regional Library,
Harrison, Ark., February 14, 1958.

Senator J. W. Fulbright,
Senate Office Building, Washington, D. C.

Dear Senator Fulbright: I understand that the President has in his budget only $3 million for the Library Services Act to rural areas for this year, instead of the maximum of $7,500,000 that the act carries. We greatly appreciate all that was done last year to bring it up to $5 million. We hope that this can be brought up to the maximum this year.

Last year, North Arkansas Regional Library was the first regional library in the State to receive a bookmobile with staff and books from the Arkansas Library Commission as a result of the Federal aid to Arkansas libraries. This has enabled us to withdraw old, wornout titles and replace with new, bright-looking books, along with many new titles in late editions. We have especially stressed science books. Last year the high schools of this area flooded us with requests on term papers in general science, chemistry, and physics. We were unable to borrow from the University of Arkansas, as their books were in use and the Arkansas Library Commission didn't have many more titles of this nature than we did. Now we have close to 500 titles in the pure science and applied sciences for the science students and adults of the area. We could not have had these books without the assistance of Federal aid. Even though we have this many new titles in the science fields, in a six-county area this is not enough new titles to meet the demand.

We are very proud of the bookmobile that we have, and we hope that we will be able to keep it by continued support and Marion and Carroll Counties passing the 1-mill tax at the next general election. One bookmobile for six counties is not adequate, but we are glad to have one.

The people of the rural areas, especially Eureka Springs, Leslie, Lead Hill, Flippin, Cotter, Lurton, Burgman, St. Joe, are using the bookmobile service good. A few of their remarks may be of interest: "* * * the children hurry to finish their lessons so they may enjoy reading books that the school has gotten from the bookmobile * * *"; "* * * It is like 'mail call' to the soldier in a faraway land * * *"; "* * * the bookmobile had helped to broaden and improve the reading habits of our whole community * * *"; "* * * just about everything I requested in art from a correspondence course was sent to me from your library, for which I will forever be grateful * * *"; "* * * I am a partial cripple, and cannot do all of the things I would like, so I spend many hours in pleasant reading * * *"; "* * * we have come to depend on the regional library for supplementary reading material for our English courses * * *", and many others.

We are all for the missiles and science program that you are working so hard for. We also want to see the books in that field and other fields on the shelves of the libraries of Arkansas and of the entire Nation. We have had such a struggle to have the books that the people need that we hate to see anything happen to the money that the Library Services Act has set aside for rural library service.

We hope that Congress will keep in mind that we cannot give the library service that we are doing if the postal rates are increased on library materials. We hope that the present rate of 4 cents for the first pound and 1 cent for each additional pound for library books can be maintained. We would like to see other library materials covered under this same act. An increase on the postal rates would work a hardship on our rural people when they mail their books back to us. There are many people who do not get to come to Harrison as often as they would like or to the branch nearest at hand.

We are very grateful to you in all of the work that you are trying to do in Washington. If we can be of any help in answering any of the questions in the library field, we will do our best.

Very truly yours,

Marion Jones,
Mrs. Marion R. Jones,
Librarian.

Assistance for School Construction

STATEMENTS OF DR. L. G. DERTHICK, COMMISSIONER OF EDUCATION, AND PERE F. SEWARD, DEPUTY COMMISSIONER, COMMUNITY FACILITIES ADMINISTRATION, HOUSING AND HOME FINANCE AGENCY

APPROPRIATION ESTIMATE

Assistance for School Construction

"[Assistance for school construction:] For an additional amount for [providing school facilities and for grants to local educational agencies in federally affected areas, as authorized by title III and title IV of the Act of September 23, 1950, as amended (20 U. S. C., ch. 14; 70 Stat. 909, 968–969), including not to exceed $700,000 for] necessary expenses of technical services rendered by other agencies [and not to exceed $5,000,000 for title IV, $41,700,000, to remain available until June 30, 1959] *in connection with titles III and IV of the Act of September 23, 1950, as amended (20 U. S. C., ch. 14), $850,000: Provided,* That no part of this appropriation shall be available for salaries or other direct expenses of the Department of Health, Education, and Welfare."

Amounts available for obligation

Description	1958 appropriation	1959 estimate	House allowance
Appropriation or estimate	$41,700,000	$850,000	$750,000
Supplemental appropriation	56,950,000		
Prior year balance available	19,103,140	8,000,000	8,000,000
Unobligated balance carried forward	−8,000,000		
Total available for obligation (total obligations)	109,753,140	8,850,000	8,750,000

Obligations by activities

Description	1958 appropriation	1959 estimate	House allowance
1. Assistance to local educational agencies	$94,491,395		
2. Assistance for school construction on Federal properties:			
(a) Under title II, Public Law 815	45,872		
(b) Under title III, Public Law 815	14,373,326	$8,000,000	$8,000,000
3. Payments for technical services	842,547	850,000	750,000
Total obligations	109,753,140	8,850,000	8,750,000

Obligations by objects

Object classification	1958 appropriation	1959 budget estimate	House allowance
SUMMARY OF PERSONAL SERVICES			
Average number of all employees	[1] 5	[1] 2	[1] 2
DIRECT OBLIGATIONS			
01 Personal services	$33,350	$14,775	$14,775
02 Travel	8,700	3,900	3,900
03 Transportation of things		200	200
04 Communication services	400		
07 Other contractual services	842,847	850,100	750,100
08 Supplies and materials	100	100	100
10 Lands and structures	7,874,198	7,980,000	7,980,000
11 Grants, subsidies, and contributions	100,991,395		
Contribution to retirement fund	2,100	900	900
15 Taxes and assessments	50	25	25
Total direct obligations	109,753,140	8,850,000	8,750,000

[1] Includes administrative and nonadministrative.

Summary of changes

	Amount
1958 actual appropriation	$41, 700, 000
1958 supplemental appropriation	56, 950, 000
Total appropriation	98, 650, 000
Deduct nonrecurring school-construction costs	97, 900, 000
Revised 1959 base	750, 000
1959 appropriation request	850, 000
Net change requested	+100, 000

	1959 budget estimate	1959 House allowance
Increase for program items: Technical services rendered by other agencies	$100, 000	
Total change requested	100, 000	

Office of Education—Assistance for School Construction, Office of Education

EFFECT OF HOUSE ACTION

Activity 3. Payments for technical services

The House allowed $750,000 for this activity, a reduction of $100,000. As a result of the reduction and increased workload, adjustments will need to be made by the Housing and Home Finance Agency in rendering technical services to the Office in connection with the school construction program.

It seems evident that if the technical services staff assigned to this program must be reduced by 12 percent at the same time that the new projects financed by the Second Supplemental Appropriations Act, 1958, are being added to the pipeline, backlogs and delays will inevitably result. It is difficult to pinpoint these geographically or by stages, however, in advance of the fact and at a time when the majority of applications under the new program have not even been received by the Housing and Home Finance Agency.

During the fiscal year 1959, a total of 1,020 school projects are expected to be under construction, and the number of construction months for inspection will total almost 6,600. The work projection shows that the rate of construction activity will advance steadily during the year and will be almost 13 percent greater than during the current year. The following table shows the number of projects under construction at each quarter end:

Projects under construction

Quarter ending:	
Sept. 30, 1958	515
Dec. 31, 1958	545
Mar. 31, 1959	560
June 30, 1959	615

During the course of construction, the agency provides an engineering inspection service in the interests of the local school district and the Federal Government. These inspections assure that the project is being constructed in accordance with the approved plans and specifications; that the agency has the information upon which to base judgments for approval of change orders during construction; that construction accounts are properly managed and that construction progress payments against the Federal grant have been earned; that prevailing wage rates are properly paid as required by law; etc.

When a project has commenced construction, in the Government's own interest at least the minimum technical services described above must be provided by the agency through the field inspection system. In addition the local school districts concerned, and their contractors, would rightly object if disbursement of construction grants were delayed because of the inability of the Government to send a representative to the construction site to inspect and certify to the Office of Education that the grant had been earned. With presently available staff, con-

struction inspections can be made on the average of once a month; and the agency would be loath to reduce this frequency further.

At the same time that this substantial construction workload is going forward, new projects are coming into the pipeline. Present estimates indicate that 325 new fund reservations will be assigned to the agency during the fourth quarter of the current year and some 90 more next year. During fiscal 1949, some 300 technical reports covering the engineering, legal, and fiscal aspects of each individual application will be supplied to the Office of Education, so that that Office may proceed to approve the application for financial assistance and disburse the initial 10 percent of the grant entitlement. The proper preparation of these technical reports is a key step in the school construction program. The applicant school districts expect and are entitled to demand prompt handling of each application, so that final planning for construction of the urgently needed classrooms may proceed expeditiously. Backlogs and delays in the handling of these reports obviously will delay also all of the subsequent steps in planning and putting these projects under construction.

In addition to the 300 technical reports which the work program assumes will be processed during fiscal 1959, there will be almost 200 additional school projects in the preconstruction stage at the beginning of the year—making a total of about 500 projects which should be processed to the contract award and construction start stage. These phases of processing include the architectural and engineering analysis of final plans and specifications; determination of final cost estimates; review and approval of the bid and award documents; and review and approval of completed contract agreements. The local school districts in this preconstruction phase, too, are most anxious to avoid the delays that a shortage of manpower for technical services might create.

In order to avoid delays in the school construction program, I strongly urge that the Senate restore the full amount of the budget estimate of $850,000 for the fiscal year 1959.

Statement of Commissioner of Education on Assistance for School Construction (Technical Services)

The program of assistance for construction of schools in federally affected areas as presently authorized by Public Law 815, as amended, extends through June 1959.

There is no request for construction funds included in the 1959 budget estimate of the Office of Education. However, the Congress has provided a supplemental appropriation of $56,950,000 for fiscal year 1958 based on the latest extension of the program for 1 year as authorized by Public Law 85–267.

The 1959 request of $850,000 is for technical services to be rendered by the Housing and Home Finance Agency in connection with the school construction program. The Deputy Commissioner, Community Facilities Administration, Housing and Home Finance Agency, will explain the need for these continuing services.

EFFECT OF HOUSE ACTION

The House allowance of $750,000 for technical services represents a reduction of $100,000. The Housing and Home Finance Agency has indicated that, based on workload estimates for fiscal year 1959, such a reduction would result in curtailed services in connection with the school construction program.

Statement of Deputy Commissioner, Community Facilities Administration, Housing and Home Finance Agency

The Housing and Home Finance Administrator has assigned to the Community Facilities Administration the responsibility for the administration of the technical services provided by the Agency under a working agreement with the Office of Education in connection with the school construction program authorized by Public Law 815, 81st Congress, as amended. The services provided cover the architectural, engineering, legal and financial fields, both in the preliminary stages and during construction, as well as necessary staff activities to support these technical services.

The working agreement between the Housing Administrator and the Commissioner of Education is intended to accomplish the following major objectives:

1. To provide more school facilities per dollar of Federal funds expended;

2. To help produce school buildings that are carefully planned architecturally and structurally to insure longer life, lower maintenance cost, and greater utility;
3. To assist the school districts in avoiding legal, financial, and administrative difficulties; and
4. To insure that the intent of Congress as set forth in the statute is carried out, including compliance with all applicable Federal laws and regulations pertinent to the expenditure of Federal funds and the Bacon-Davis Act.

To realize these objectives, we provide technical assistance to the Office of Education and to the local school district.

TECHNICAL SERVICES PROVIDED

A school district in a federally impacted area files with the Office of Education a request for financial assistance in the construction of school facilities. Unless the Commissioner rejects the application, the school district then prepares and submits an application for a specific construction project. Our activities in the school construction program begin principally with the receipt of a notice of fund reservation from the Office of Education for a specific application by a school district for Federal assistance. That application outlines the scope of the proposed work, the type of construction desired, an estimate of the cost, from what source and in what amount from a monetary standpoint the district proposed to participate, the location of the proposed site, evidence of title to the site, a citation to its authority to construct, maintain and operate the proposed school and other pertinent detail. That material is examined in our field office and a recommendation based on the engineering, financial and legal aspects of the project is submitted to our central office. We here review the findings of the field and prepare a recommendation to the Commissioner of Education. We also secure from the Department of Labor a determination as to the wage rates applicable to the proposed project.

Upon the approval of the project by the Commissioner of Education, the school district and our Office are advised. The school district then employs its architect who prepares the detailed plans and specifications. The architect's contract is examined and concurred in by our regional office. Plans and specifications are in turn submitted to the State department of education, the field representative of the Office of Education, and to our regional office. There they are checked for conformity to the project as approved by the Office of Education, for structural soundness, for their adaptability to competitive bidding, for nonrestrictive use of materials, and other items. When the plans, specifications and proposed contract documents are approved, the school district is authorized to advertise for bids. The district is also provided with the wage rates predetermined by the Secretary of Labor for use in the construction of the project. After bids are received, tabulated and the low bidder determined, the school district awards the contract subject to the concurrence of our regional office. Before concurring in the award the regional office examines the tabulation of bids, the proposed award of the contract, the bond or bonds for performance, the necessary resolutions by the governing body of the school district, etc. When approved the contract is official. The field engineer works out with the architect and contractor the schedule of operations.

When work is undertaken the field engineer makes periodic inspections to insure that the work done, and materials used, are in conformity with the contract as regards type, quality, scope, and workmanship; that wage rates paid are in accord with the approved schedule; approves or modifies the necessary change orders; checks and recommends payments to the school district from the Federal allocation, checks all payments made on behalf of the project from the construction account; and performs other items of work as may be necessary in the accomplishment of the project.

The regional office works with the local school district in the preparation of the equipment schedules, the advertising and award of contracts for equipment, and the inventory and payment therefor.

The final inspection, acceptance of the work and certification for final payment, together with the final report on the project is the responsibility of our field force.

In the case of projects constructed on federally owned sites, the full responsibilities for all planning and construction operations are in the Housing and Home Finance Agency.

PROGRAM VOLUME

The school construction program (including the effect of the recently enacted supplemental appropriation) involves Federal assistance to the extent of $826

million and local financial participation of an estimated additional $375 million—a total building outlay of more than $1 billion. It is estimated that these funds will provide for the construction of 3,843 school projects throughout the land. Except for some 220 temporary and permanent schools built by the Federal Government on Federal properties, it is anticipated that all of these school projects will be constructed by local school districts with Federal financial and technical assistance.

The level of activity of the Office of the Administrator in connection with the school construction program is governed by two factors: first, the rate of fund reservations assigned to this Agency by the Commissioner of Education and second, the rate of the progress of construction activity of the individual projects. By the end of March 1958 a total of 3,428 fund reservations had been received from the Office of Education. At the same time construction had started on 3,174 of these projects and 2,673 had been completed.

Thus, some 501 projects are currently under construction and 254 others are in the preconstruction stages. The latest estimate of the Office of Education indicates that an additional 415 projects will be assigned—bringing the total number of active school projects in this Agency's workload to 1,170.

TECHNICAL SERVICES REQUIREMENTS

The appropriation request for technical services for 1959 is $850,000—compared with the total of $842,547 available for the current year. As indicated in the detailed justification statement, provision is made for an average staff of 108. The staffing pattern assumes the assignment of approximately 81 man-years of engineering skills out of a total of 93 man-years allocated direct to processing costs.

By and large our activities are conducted through the staff of the regional offices. I might add that the original assignment to this Agency is based upon the fact that the Community Facilities Administration has had many years of experience in the administration and operation of Federal grant-in-aid construction programs.

EFFECT OF HOUSE ACTION

The House Appropriations Committee recommended and the House approved an appropriation for technical services in the amount of $750,000—a reduction of $100,000 from the budget request. The House-approved figure is not adequate to permit this Agency to continue to provide the required technical services at the levels of recent years. The $750,000 estimate would fund an average staff of approximately 95—a reduction of about 13 from the budget estimate. This is equivalent to an average of 2 man-years of technical services staff time for each of the Agency regional offices.

A reduction of staff time to this extent is bound to have an adverse effect on the school construction program. The principal results would be to delay to some extent the preparation of technical reports on new project reservations for the approval of the Office of Education and in processing projects to the construction contract award stage, and to curtail our construction inspection activities. It is the judgment of this Agency that construction inspection has already been reduced to the minimum level consistent with the responsibilities of the Federal Government in the school construction program.

Curtailment of technical services would lead, among other things, to delays in the beginning of construction, to delays in the certification of payments of Federal funds due local school districts, and to the possibility of delays in completing construction of the additional classroom facilities involved. Such delays would be most unfortunate during this period when the Administration is making a great effort to expedite construction activity and to promote employment.

I therefore strongly urge that the Senate restore the full amount of the budget estimate of $850,000 for the fiscal year 1959.

NEED FOR RESTORATION OF HOUSE CUT

Mr. DERTHICK. When we come to assistance for school construction and the technical services required by the Community Facilities Administration of the Housing and Home Finance Agency, there was a cut by House action of $100,000.

Our partners, the Community Facilities Administration, feel that it is most urgent that they have the full amount requested of $850,000,

and Mr. Seward, the Deputy Commissioner, is available to give evidence showing that need.

Senator HILL. Maybe we better have a statement from Mr. Seward on that matter. We had it before the full committee in the supplemental appropriation bill with reference to a kindred item.

Come around, Mr. Seward.

Will you identify yourself for the record?

Mr. SEWARD. I am Pere F. Seward, Deputy Commissioner, Community Facilities Administration, Housing and Home Finance Agency.

I have, Senator Hill, a very short statement that I would like to read, sir, if I may.

Senator HILL. All right.

Mr. SEWARD. The Community Facilities Administration of the Housing and Home Finance Agency provides technical services in the design and construction of schools under Public Law 815, as amended.

Under this statute, financial assistance is being provided for 3,843 school projects throughout the country, including some 270 projects stemming from the last extension of the program.

The budget estimate for technical services requirements is $850,000, compared with a total of $842,547 available for the current year.

The House Appropriations Committee recommended and the House approved an appropriation in the amount of $750,000—a reduction of $100,000 from the budget request.

EFFECT OF HOUSE ACTION

The House-approved figure is not adequate to permit this Agency to continue to provide the required technical services at the levels of recent years.

The principal results would be to delay to some extent the preparation of technical reports on new project reservations for the approval of the Office of Education and the processing of projects to the construction contract award stage, and to curtail our construction inspection activities which we feel have already been reduced to the minimum.

This could lead to delays in the beginning of construction, to delays in the certification of payments due local school districts, and to the possibility of delays in completing construction of the additional classrooms involved.

These results would not be consistent with the current efforts of the Administration to expedite construction activity and to promote employment.

I therefore strongly urge that the Senate restore the full amount of the budget estimate of $850,000 for the fiscal year 1959.

Senator HILL. Do you feel that there might be considerable delay if that $100,000 were denied in this bill?

Mr. SEWARD. Yes, sir.

Senator HILL. That delay would, of course, take place in many different sections because we have these impacted areas pretty well scattered over the country.

Mr. SEWARD. They are very widely scattered, sir.

Senator THYE. Mr. Chairman.

Senator HILL. Senator Thye.

Senator THYE. What areas would be apt to suffer the delay? What specific State area would be involved?

Mr. SEWARD. Geographical, Senator?

Senator THYE. Yes.

Mr. SEWARD. I do not know that that would be any more prevalent in one than the other, sir.

This program operates over the 48 States and the several Territories, including Alaska, Hawaii, Puerto Rico, Guam.

Senator THYE. I wondered if you could be specific on which of the projects might suffer.

Mr. SEWARD. I could not possibly.

Senator THYE. It is the general overall picture?

Mr. SEWARD. That is right, sir.

Senator THYE. Thank you.

OFFICE OF EDUCATION

SALARIES AND EXPENSES

STATEMENT OF DR. L. G. DERTHICK, COMMISSIONER OF EDUCATION; ACCOMPANIED BY DR. LLOYD E. BLAUCH, ASSISTANT COMMISSIONER FOR HIGHER EDUCATION; AND JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

SALARIES AND EXPENSES

"[Salaries and expenses:] For expenses necessary for the Office of Education, including surveys, studies, investigations, and reports regarding libraries; [fostering coordination of public and school library service;] coordination of library service on the national level with other forms of adult education; [developing library participation in Federal projects; fostering nationwide coordination of research materials among libraries, interstate library coordination and the] development of library service throughout the country; purchase, distribution, and exchange of educational documents, motion-picture films, and lantern slides; [collection, exchange, and cataloging of educational apparatus and appliances, articles of school furniture and models of school buildings illustrative of foreign and domestic systems and methods of education, and repairing the same;] and cooperative research, surveys, and demonstrations in education as authorized by the Act of July 26, 1954 (20 U. S. C. 331–332); [$7,000,000] *$7,950,000*, of which not less than $550,000 shall be available for the Division of Vocational Education as authorized."

Amounts available for obligation

Description	1958 appropriation		1959 estimate		House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
Appropriation or estimate	589	$7,000,000	585	$7,950,000	568	$7,800,000

Obligations by activities

Description	1958 appropriation		1959 estimate		House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Administration of school assistance in federally affected areas	140	$1,064,840	61	$892,000	61	$892,000
2. Educational services:						
(a) Planning	3	28,465	3	28,520	3	28,520
(b) Vocational education	71	623,915	71	633,000	71	633,000
(c) State and local school systems	133	1,144,940	157	1,333,000	147	1,265,000
(d) Higher educational institutions	35	317,400	78	650,000	73	590,000
(e) International education	27	184,735	31	296,000	30	284,000
(f) Publications services	27	227,330	31	261,000	30	251,000
(g) Legislative reference	7	61,040	7	62,000	7	62,000
3. Research services:						
(a) Planning	13	109,800	13	127,000	13	127,000
(b) Research and statistical services	76	582,585	76	597,000	76	597,000
(c) Projects		2,300,000		2,700,000		2,700,000
4. Program direction and management	57	354,950	57	370,480	57	370,480
Total obligations	589	7,000,000	585	7,950,000	568	7,800,000

Obligations by objects

Object classification	1958 appropriation	1959 budget estimate	House allowance
SUMMARY OF PERSONAL SERVICES			
Total number of permanent positions	589	585	568
Full-time equivalent of all other positions	2	53	52
Average number of all employees	565	615	601
Number of employees at end of year	589	585	568
DIRECT OBLIGATIONS			
01 Personal services	$3,690,842	$4,064,555	$3,974,220
02 Travel	275,925	310,280	296,250
03 Transportation of things	5,695	2,495	2,495
04 Communication services	69,405	74,500	73,250
06 Printing and reproduction	285,600	334,695	317,245
07 Other contractual services	89,560	135,460	122,605
Research contracts	2,300,000	2,700,000	2,700,000
08 Supplies and materials	35,750	40,590	39,725
09 Equipment	23,510	35,205	27,605
11 Grants, subsidies, and contributions:			
Contribution to retirement fund	219,698	247,905	242,400
15 Taxes and assessments	4,015	4,315	4,205
Total obligations	7,000,000	7,950,000	7,800,000

Summary of changes

	Positions	Amount
1958 actual appropriation	589	$7,000,000
Deduct nonrecurring equipment costs		−14,505
Revised 1959 base	589	6,985,495
1959 appropriation request	585	7,950,000
Net change requested	−4	+964,505

Summary of changes—Continued

	1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount
Changes: For mandatory items:				
Retirement contributions annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)	--------	$5,953	--------	$5,953
Retirement contributions annualization of 1958 positions including 25 additional positions established in 1958	--------	6,130	--------	6,130
Annualization costs of 1958 positions including 25 additional positions established in 1958	--------	105,990	--------	105,990
Subtotal	--------	118,073	--------	118,073
For program items:				
Educational services:				
Administration of school assistance in federally affected areas	−79	−172,840	−79	−172,840
Development of vocational education	--------	130	--------	130
State and local school systems	17	122,690	14	104,690
Civil defense	7	50,000	--------	--------
Higher educational institutions	43	332,755	38	272,755
International education	4	53,950	3	41,950
Publications services	4	33,780	3	23,780
Legislative reference	--------	−162	--------	−162
Research services:				
Planning	--------	2,100	--------	2,100
Research and statistical services	--------	12,491	--------	12,491
Cooperative agreements	--------	400,000	--------	400,000
Program direction and management	--------	11,538	--------	11,538
Subtotal	−4	+846,432	−21	+696,432
Total change requested	−4	+964,505	−21	+814,505

EFFECT OF HOUSE ACTION

The House allowance of $7,800,000 represents a reduction of $150,000. Generally, the allowance provides the amount requested for the cooperative research program, and maintains the current staff in several divisions of the Office but reduces by 10 positions and $100,000, the amount requested to expand divisional staff in high priority areas, and eliminates 7 positions and $50,000 requested for educational civil defense activities. Specifically, the effect of the House action is as follows:

1. The allowance will provide the amounts requested for the following activities:

(*a*) Administration of school assistance in federally affected areas
(*b*) Educational services:
- Planning
- Vocational education
- Legislative reference

(*c*) Research services:
- Planning
- Research and statistics
- Research projects

(*d*) Program direction and management services

2. The allowance provides certain increases in but reduces the effectiveness of projects planned in high priority areas in the following activities:

(*a*) *State and local school systems.*—The House allowance provides an increase of 14 positions and $120,060, including $15,970 for mandatory items and $104,690 for program expansion, less $600 for nonrecurring equipment costs. This will enable the Office to initiate projects which are important in the evaluation of our existing school programs, and to secure information with respect to offerings in science, mathematics, and foreign languages.

The program reduction of $18,000 will prevent the Office from establishing 3 additional positions to serve in the areas of elementary education and school administration. The loss of these positions and funds will curtail or eliminate projects in these fields.

(*b*) *Civil defense.*—The House allowance eliminates 7 positions and $50,000 requested for civil defense activities.

(*c*) *Higher educational institutions.*—The House allowance would provide an increase of 38 positions and $272,600, including $445 for mandatory items, and $272,755 for program expansion less $600 for nonrecurring equipment costs. This will enable the Office to initiate and carry forward a number of high-priority projects in the field of higher education.

A reduction of $60,000 and 5 positions in the proposed budget, however, will retard and impair the effectiveness of new projects regarded as essential in 1959. The new proposals are principally concerned with carrying on the recommendtions of the President's Committee on Education Beyond the High School, such as planning statewide programs and development of improved and increased supply of faculty, and a survey of the status and need of higher education facilities. These projects would have to be curtailed or postponed to the point where results of studies would not be available as soon as desired for planning purposes.

(*d*) *International education.*—The House allowance would provide an increase of 3 positions and $99,265, including $60,615 for mandatory items, and $41,950 for program expansion less $3,300 for nonrecurring equipment costs. This increase will enable the Office to continue and accelerate a study of education in Russia and Communist-dominated countries, and provide funds necessary to carry out the educational exchange with Russia.

A reduction of $12,000 would prevent the establishment of an additional specialist position and retard the project on education in Communist-dominated countries, and limit the negotiated exchange program with Russia.

(*e*) *Publications services.*—The House allowance would provide an increase of 3 positions and $23,670, including $1,395 for mandatory items, and $23,780 for program expansion less $1,505 for nonrecurring equipment costs. The allowance would partially provide for increased workload.

A reduction of $10,000 and 1 position will handicap our efforts to process publications more efficiently. With the increasing number of publications, and the numerous requests being received which need prompt attention, increased funds are necessary.

New positions requested for fiscal year 1959

	Grade	New positions		Eliminated		Total	
		Number	Annual salary	Number	Annual salary	Number	Annual salary
1. SCHOOL ASSISTANCE IN FEDERALLY AFFECTED AREAS							
Departmental:							
Program operations adviser	13			−5	−$48,175		
Associate program officer	12			−2	−16,215		
Research assistant	11			−1	−7,250		
Project analyst	11			−8	−56,280		
Program research analyst	11			−1	−7,680		
Project analyst	9			−5	−30,845		
Research assistant	9			−1	−6,655		
Property certifying analyst	9			−2	−11,960		
Fiscal accountant	7			−1	−5,470		
Administrative clerk	5			−2	−8,285		
Property examining clerk	5			−2	−9,365		
Secretary (stenographer)	5			−4	−16,705		
Statistical clerk	5			−1	−4,345		
Secretary (stenographer)	4			−4	−15,020		
Clerk (typing)	4			−3	−10,925		
Control clerk	4			−2	−7,255		
Subtotal				−44	−262,430		
Field:							
Field representative	13			−6	−58,240		
Associate field representative	12			−12	−100,945		
Project analyst	11			−1	−7,680		
Secretary (stenographer)	5			−4	−16,840		
Secretaries and clerks (typing)	4			−7	−26,880		
Clerk-stenographer and clerk-typist	3			−5	−17,745		
Subtotal				−35	−228,330		
Subtotal, school assistance						−79	−$490,760

New positions requested for fiscal year 1959—Continued

	Grade	New positions		Eliminated		Total	
		Number	Annual salary	Number	Annual salary	Number	Annual salary
2. EDUCATIONAL SERVICES, STATE AND LOCAL SCHOOL SYSTEMS							
Specialist:							
Mathematics and science	14	2	$20,640				
State school administration	13	1	8,990				
Local school administration	13	1	8,990				
School finance	13	1	8,990				
School housing	13	1	8,990				
Adult education	13	1	8,990				
Exceptional children and youth	13	1	8,990				
Guidance and student personnel	13	1	8,990				
Research assistant	9	2	10,880				
Secretary	5	2	7,340				
Do	4	4	13,660				
Subtotal		17	115,450			17	$115,450
CIVIL DEFENSE							
Director, civil defense project	15	1	11,610				
Assistant director	14	1	10,320				
Educational civil defense officer	13	1	8,990				
Do	12	1	7,570				
Administrative aid	6	1	4,080				
Secretary	5	2	7,340				
Subtotal		7	49,910			7	49,910
Subtotal, State and local school systems						24	165,360
HIGHER EDUCATIONAL INSTITUTIONS							
Specialist:							
Professional education	14	1	10,320				
College and university organization	14	1	10,320				
College and university business administration	14	1	10,320				
Inventory of physical facilities	14	1	10,320				
Liberal and graduate education	13	1	8,990				
Teacher education	13	1	8,990				
Professional education	13	2	17,980				
College and university organization	13	1	8,990				
College and university business administration	13	1	8,990				
College programs of less than bachelors degree length	13	1	8,990				
Inventory of physical facilities	13	1	8,990				
Higher education statistics	13	1	8,990				
State and regional organizations	13	1	8,990				
Research assistant	9	5	27,200				
Do	7	4	18,100				
Secretary	5	7	25,690				
Clerk	5	4	14,680				
Secretary	4	8	27,320				
Clerk-typist	3	1	3,175				
Subtotal		43	247,345			43	247,345
INTERNATIONAL EDUCATION							
Research specialist	12	1	7,570				
Secretary	5	2	7,340				
Clerk-stenographer	4	1	3,415				
Subtotal		4	18,325			4	18,325
PUBLICATIONS SERVICES							
Assistant director	14	1	10,320				
Copy clerk	5	1	3,670				
Secretary	5	1	3,670				
Publications clerk	3	1	3,175				
Subtotal		4	20,835			4	20,835
Total		75	451,865	−79	−$490,760	−4	−38,895

Statement of Commissioner of Education

Mr. Chairman and members of the committee, I wish to express my appreciation for the opportunity to present the budget program of the Office of Education for the fiscal year 1959. The very constructive reception which this committee has extended to the office program in recent years has been instrumental in enabling us to move forward in several critical areas of education. I am sure the committee will be interested in our plans for further improvement.

We, in the Office of Education, have a responsibility to the Nation to provide a program that will help our schools meet the challenge of an ever-changing world. Our schools now must educate our people not only in the arts which are basic to useful living; they must also provide the knowledge and skills that will enable us to exist in a world where scientific achievement is the touchstone of survival.

Americans today are more conscious of education than ever before. Rapidly increasing enrollments, coupled with population migration, are resulting in overcrowded schools with insufficient numbers of teachers; furthermore, today's students are demanding more years of schooling and a broader education. The pressures on our educational systems brought on by the sheer weight of numbers are thus multiplied by the need to expand and improve our educational processes. The problems of school finance, organization, and administration are receiving constantly greater attention by State legislatures and citizen groups as these problems become more acute and their solutions more compelling. Now the sudden realization that American education faces a new external challenge from the Russian emphasis on education gives these problems a greater sense of urgency in the public mind.

The Department has submitted to the Congress legislative proposals to strengthen our educational systems, particularly in these fields which are critical to the national security. These proposals, if enacted, will require the appropriation of additional funds for the fiscal year 1959. The requests which are now before the committee, however, represent the requirements for those high-priority activities that need to be accomplished within our present legislative authorizations.

The cooperative research program, which is the largest single item in our budget. will be continued and expanded. In 1958, the appropriation of $2,300,000 includes some $900,000 for new research projects. The $2,700,000 requested for 1959 includes $500,000 for new research projects and $2,200,000 for continuation of projects begun in 1957 and 1958. Though the amount available for new projects is less in 1959 than in 1958, these funds will permit the approval of high-priority research projects.

In certain areas, the budget of the Office includes new projects and activities where critical situations have been identified which compel prompt and effective action. These include (*a*) the need to increase substantially the resources of the Office in the area of international education where Communist educational developments have suddenly awakened the Nation to the need for thorough and continuing appraisal of educational systems in the U. S. S. R., Red China, and the satellite countries; (*b*) the vast problems of improving the readiness and capability of higher educational institutions to respond to the responsibility placed on them by the emerging problems in higher education, in science and technology; and (*c*) the necessity to gather and disseminate essential information on conditions in our elementary and secondary schools which bear primary responsibility for increasing our supply of trained manpower, especially in the scientific field.

These expanded activities will enable the Office to develop information and recommend action programs which are sorely needed to improve the readiness of our educational system to respond to the needs of the day. These activities are desirable and essential, regardless of whether the new legislative proposals are enacted.

The budget request for 1959 provides for a continuation of many Office services at the same level they are authorized for 1958.

I shall briefly explain each of the major items in our budget in the order of their presentation in the justification. We will then be ready to give such further details as the committee may desire.

ADMINISTRATION OF SCHOOL ASSISTANCE IN FEDERALLY AFFECTED AREAS

The request for this item amounts to $892,000, as compared with the fiscal 1958 appropriation of approximately $1,065,000. The budget cutback in this program is required to comply with the procedure for requesting funds only for activities

authorized by law. Since Public Law 874, which authorizes payments to federally affected school districts, is scheduled to expire as of June 30, 1958, liquidation of this program must be budgeted for fiscal year 1959. However, a supplemental request for funds will be presented to the Congress at the proper time to reflect any legislative action taken to further extend this program beyond June 30, 1958.

EDUCATIONAL SERVICES

Vocational education.—The amounts requested for this item will permit the retention of 71 positions budgeted for fiscal year 1958.

State and local school systems.—Funds requested for this activity will permit the addition of 17 positions to initiate projects which are important for the evaluation of our existing school programs and to permit information on such crucial questions as the extent of mathematics, science, and foreign-language offerings in the schools and the degree to which these subjects are being taught in accordance with recent discoveries and modern techniques. One of the big deficiencies in our factfinding program is our inability to tell promptly and accurately the numbers of students enrolled in various subjects, and the precise content of educational curriculums, and the numbers of teachers who are entering the various fields or studies each year in relation to present and anticipated needs.

The governmentwide policy is to carry out civil-defense activities as an integral part of related Government operations. Under this policy, there is included in this estimate $50,000 and 7 new positions to carry out the delegated civil-defense activities relating to this program.

Higher educational institutions.—The Nation is now confronted with unusually difficult problems in higher education. A number of them have been identified by the President's Committee on Education Beyond the High School; others have been emphasized by the rapidly evolving international situation. It now seems clear that these problems must be attacked without delay. The Office of Education must play its part in helping the colleges and universities meet the requirements and develop more adequate information as a basis for action programs. I need only mention the tremendous growth in school population which is now encroaching on the colleges and universities for which they are substantially unprepared in order to underscore the Federal responsibility for taking stock of our needs. It has been estimated, for example, that our college population will double by 1970, and already the shortages of college faculties and facilities have become painfully apparent to many competent observers. The first responsibility of the Office of Education is to gather and analyze reliable information on the extent of needs, capabilities, and plans for meeting needs by institutions of higher learning. This will help to direct Federal and State action programs into areas where assistance can be of the greatest benefit. The 1959 budget includes provision for 43 additional positions and other expenses to carry forward this program.

International education.—Education is a principal weapon of communism. Education is used to identify talent among the masses, and to train this talent to perform functions ordained by the state. Thus, the huge Eurasian bloc of Soviet States, with some 900 million people stretching from the Yellow Sea to the Baltic, is being welded by education into as formidable an economic, political, and military force as the world has known.

It is the responsibility of the Office of Education to gather full and current information about education in other countries; analyze the data for accuracy and comprehensiveness; and to interpret the significance of educational developments in terms of the national interest.

To secure strategic information about educational institutions and practices in the U. S. S. R. and other selected countries, and to provide a basic understanding and interpretation of documentary materials, it is proposed to send teams of experts in some cases, and, in others, individual experts, to study specific aspects of education and to make reports. Proposals have been made to the State Department by officials of the U. S. S. R. for reciprocal visits of teams of experts. These proposals are included in our budget request.

Publications services.—The budget request for fiscal year 1959 will permit the addition of four positions to the staff of the Office to help service an increasing workload of requests for publications and an increasing volume of editorial and other work involved in meeting the demands for educational information.

RESEARCH SERVICES

Research and statistical services.—No additional positions are requested for this activity in fiscal 1959. There will be continued demands for enlargement and expansion of the recurring statistical studies undertaken by the Office of Education to meet the needs of the public and private educational systems and groups. Staff increases in recent years should enable us to keep abreast of the highest priority needs.

Research projects.—Funds requested for fiscal year 1959 will permit the Office of Education to continue the financing of projects approved in fiscal years 1957 and 1958 and to approve new projects in the amount of $500,000 during fiscal year 1959. The level of new project approvals for fiscal year 1959 will be about one-half that established in the 2 previous years, but will permit the commencement of work on projects with the highest priority.

Program direction and management services.—Request for central managerial services for fiscal year 1959 will permit no increase in staff over that provided in fiscal year 1958. The increasing workload in the Commissioner's immediate office and the administrative management services of the office will be absorbed by the existing staff.

Effect of House action

The House allowance of $7,800,000 represents a reduction of $150,000 below our request. The allowance provides the amount requested for the cooperative research program and for several divisions of the office in which we propose to maintain the current level of operation. The allowance, however, reduces by $100,000 the amount requested to expand divisional staff in high-priority areas, and eliminates the $50,000 requested for educational civil-defense activities.

Our budget as presented represented, in our judgment, a minimum amount to provide necessary expansion to undertake new studies and provide services to the States and higher education institutions. We believe it is important at this time to gather and disseminate additional information that will be useful to the Nation in preparing for the expanding enrollments in higher education institutions, and that will be helpful to the States and local school systems in the evaluation and improvement of curriculums and teaching methods. We need to have more factual information concerning educational systems in Communist-dominated countries. We need to expand our program of publications to reach the greatest number of people concerned with the improvement of education in this country. The office is under great pressure to accelerate our programs in these areas. In order adequately to meet these challenges, the full budget is necessary.

We wish to urge that the reduction of $100,000 be restored. The restoration of this amount will enable the office to proceed with the important projects which were planned for 1959 and which we feel should not be curtailed or postponed.

The estimate included $50,000 for civil-defense activities, which we are no longer requesting be included in this appropriation. It is our understanding that the Administrator of Civil Defense will request the Independent Offices Subcommittee to include funds in the Federal Civil Defense appropriation for allocation to the agencies to whom certain civil-defense functions have been delegated.

RESTORATION REQUESTED

Senator HILL. Dr. Derthick.

Dr. DERTHICK. I would like the privilege of reading a 4-minute statement on the "Salary and expenses" item of our budget.

Senator HILL. You are asking for restoration of $100,000.

Dr. DERTHICK. Yes, sir. In the fiscal year 1958, Congress appropriated $7 million, an increase of $1,730,000 over the previous year, to carry forward our cooperative research program, and to provide for maintaining on a full-year basis new staff provided in the prior year.

We are requesting $7,950,000 for the fiscal year 1959, an increase of $950,000, which represents the requirements for high-priority activities and the continuation of other Office services at the current level. Legislative proposals to strengthen our educational systems

have been submitted to the Congress which, if enacted, would require additional funds.

The major items in this part of our budget are as follows: "Administration of school assistance in federally affected areas:"

ADMINISTRATION OF PUBLIC LAW 874

A decrease of $172,840 is reflected for the administration of Public Law 874, since this law expires on June 30, 1958. However, a supplemental estimate will be presented, based on legislative action taken to extend this program.

EDUCATIONAL SERVICES

"State and local school systems": An increase of $138,060 is requested to permit the addition of 17 positions to initiate projects which are important to the evaluation of our existing school programs, and to secure information with respect to offerings in science, mathematics, and foreign languages.

Under the governmentwide policy to carry out civil-defense activities as an integral part of related Government operations, $50,000 is included to provide 7 new positions to carry out these delegated responsibilities.

Senator HILL. How many positions, Doctor?

Dr. DERTHICK. Seven.

"Higher educational institutions": The budget includes provision for 43 new positions and other necessary expenses totaling $332,600 to initiate urgent projects to gather and analyze reliable information on the extent of needs, capabilities, and plans for meeting emergency needs by institutions of higher learning.

REASONS FOR NEW POSITIONS

Senator THYE. Mr. Chairman. At that point, before you leave that paragraph, why is there an increase in the number of new positions, 43 new positions?

Dr. DERTHICK. I might say, Senator Thye, that we have identified the following critical areas in education:

One, higher education;

The President's Committee on Education Beyond High School and other evidence indicates that college enrollments are going to double within the next 10 or 12 years' time. Right now we have critical shortages in the higher institutions of learning. For example, we have 18,000 vacancies a year and we have only 3,500 people available to fill those vacancies because all the rest of society is competing for the small pool.

When the enrollment doubles we can only imagine the critical shortages there will be in faculty alone.

That example may be multiplied in every endeavor of higher education: facilities, financing, curriculums, and so forth.

It is going to mean, unless this country gets ready for it, that the doors of colleges and universities will be closed to hundreds of thousands, and certainly tens of thousands, of our young people.

Now, upon the Office of Education is imposed an increasing responsibility for information. It is quite frustrating to us to attempt to answer these demands without adequate personnel.

Senator THYE. When you answer the request, what would be expected of some of these 43 new positions, what would they do? We will say that the committee allows you the 43 new positions. Then where would you assign them?

EFFECT OF HOUSE CUT

Dr. DERTHICK. May I explain this before we answer that?

Senator THYE. All right.

Dr. DERTHICK. The House allowance cut from the salaries and expense part of our budget this $100,000.

Senator THYE. Yes.

Dr. DERTHICK. In adjusting to that cut, we would lose 5 of the 43 positions in higher education.

Now, I have our Assistant Commissioner for Higher Education here. We have discussed these items. He has them right at his fingertips.

Will you give Senator Thye and the chairman the information requested on just what these 43 positions would do? Give some typical examples. Then you might like for us to give you information on what the cut will mean.

Senator THYE. I am more interested in what they would do. In that way we would be better qualified to justify the restoration.

Dr. DERTHICK. Dr. Blauch, will you give the committee that information?

Dr. BLAUCH. I will take one or two samples which illustrate the things we have been doing.

Five new positions would be devoted to carrying forward a rather extensive inventory of the physical facilities of colleges and universities. That is a study which we have undertaken during the past year for it is necessary to know what the facilities of the institutions are, how many students they could accommodate, what else would be needed, and what plans the institutions are making for the next few years to provide facilities to accommodate larger numbers of students.

Dr. DERTHICK. That information is not available anywhere and it is the responsibility of the Office to provide it.

Senator THYE. I was trying to get that clear in my mind.

Suppose you sent word out to a college, "Will you give our agency this type of information," and you listed it. Would you not receive that information or is it necessary for you to send someone, out to make an appraisal of the plant?

Dr. DERTHICK. You have to do both, Senator Thye, to get an accurate study and in order to expedite it. There are some 1,900 institutions of higher learning or higher education in the country.

Senator THYE. That is your universities and colleges?

Dr. DERTHICK. Yes, sir.

Senator THYE. That is what I was trying to get clear in my mind. Assuming that you wanted to get some information on the University of Minnesota: Would it be necessary for you to send someone out to appraise the University of Minnesota plant or could you ask of

President Morrill of the University of Minnesota, "What is your plant facility?" and you could ask him specific questions. Would he not give you the answers categorically on each question?

Dr. DERTHICK. Well, I would presume that in the case of the University of Minnesota we would get that kind of high quality and prompt cooperation.

Senator THYE. Where would you anticipate that you would have problems?

METHOD OF SECURING INFORMATION

Dr. DERTHICK. Out of your experience, Dr. Blauch, will you contribute to that answer?

Dr. BLAUCH. Well, the first step would be the sending of a rather extensive questionnaire in which we would get information building by building. There are a goodly number of institutions that could give us that information themselves, but there are others to which we would have to send a specialist to help them get the information in the form that we need it.

Senator THYE. I am having a little difficulty seeing through the need of sending someone out there because it would seem to me that President Morrill has his entire administrative staff as well as the faculty and that if you had laid before him certain questions that he would call a conference and they would commence to answer those questions, would they not?

Dr. BLAUCH. We do not anticipate any difficulty with the University of Minnesota. The unfortunate thing is that many institutions are not as well organized as the University of Minnesota.

Senator THYE. I will take you a few more miles away. Go to St. Peter, Minn., to Gustavus Adolphus. Would they be able to lay that information before you?

At the present time you have not made your case convincing to me and I am trying to get the answers so that the case is most convincing when we, Senator Hill, the chairman and the others of the committee, go before the full committee and we have to commence to justify why the House figure shall not stand.

Dr. BLAUCH. There is one point, Senator, that I perhaps might make in this connection. These five people will not go to the field, at least not a very large number of them. These people will devote their time to the analysis, collation, and preparation of the reports on the data we get from the institutions. It is only the occasional institution that will have difficulty, and we will help only where that becomes necessary.

These are not field positions. They are people who will work in the office collecting the information, compiling it and preparing the necessary reports.

Senator THYE. I can understand and appreciate the study of the report and compiling it and preparing the questionnaire, but sending them into the field was the thing that was a little difficult for me to understand because if President Morrill of the University of Minnesota was unable to make a report so that you would have to have somebody appraise that plant, I would question the judgment there.

Dr. BLAUCH. This will be done only where we have special request for it.

Senator HILL. Would you say that sending them to the field would be the exception, that the rule would be that you get your information through the questionnaire?

Dr. BLAUCH. Yes, sir.

Dr. DERTHICK. We appreciate the spirit of your inquiry, Senator Thye. It is helpful and certainly challenging to us.

CRITICISM OF OFFICE

The Office of Education has at times been rather severely criticized by agencies throughout the country for not having complete information and not having it promptly.

While these people are mostly folks in the office to do the research and to make the analysis and reports, if we had 1950 or 1960 institutions of higher learning and suppose we get from 1850 of them the kind of cooperation that we have a right to expect and we ought to expect, if 100 institutions are missing where they need advice and counsel in doing the report and need to be stimulated, it takes there port from those 100 to make a complete picture along with the 1850.

Also, those 100 could be the difference, without this attention, between getting the report out in 6 months and maybe 18 months or 2 years.

Senator THYE. Thank you, Mr. Chairman.

Senator HILL. I may say that Dr. Derthick knows that since January we have had many weeks of hearings before the Senate Committee on Labor and Public Welfare on this matter of information. The testimony confirms what the doctor said about this enormous increase in the demand on the part of students for admission to our colleges and universities. We are going to have a tidal wave, so to speak, in a few years' time.

Dr. DERTHICK. Yes; and we do not want the Office of Education to be lacking in doing its part to help the country meet the problem.

Senator HILL. You are trying to prepare for this situation which we know is inevitable.

EFFECT OF HOUSE REDUCTION

Dr. DERTHICK. The cut by the House would reduce this by five positions. We have information on what that would mean.

Senator HILL. You may supply that for the record.

Dr. DERTHICK. Yes.

(The information referred to follows:)

DIVISION OF HIGHER EDUCATION

EFFECT OF REDUCING THE APPROPRIATION BY $60,000

The effect of the House allowance for the Division of Higher Education, a reduction of $60,000 from the budget request, will be to eliminate five new positions and $5,000 for consultant services, and to reduce amounts available for machine statistical tabulation, printing, and other items. The following results would ensue:

1. The work to be done on the financing of current expenses of colleges and universities will have to be omitted. This will make it impossible for the Division to render service in one of the most critical areas of higher education.

2. The studies of the preparation of teachers for elementary and secondary schools will be brought almost to a standstill. The present small staff is overburdened with correspondence and carrying on other day-to-day routine functions

and is not able to devote much time to the study of current problems in teacher education and to assisting States and institutions in developing their programs.

INTERNATIONAL EDUCATION

Dr. DERTHICK. An increase of $111,265 is requested to provide for 4 additional positions in an accelerated program to secure strategic information about educational institutions and practices in the U. S. S. R. and other related countries, and to provide for an educational exchange with Russia in accordance with the agreement negoated by the United States.

That is another place where the cut would hit. I think we are all aware as to how hard we have been hit about information. We have not been able to do anything about what is being done in education in China.

Senator THYE. Mr. Chairman.

Senator HILL. Yes.

Senator THYE. Could you possibly get into Red China and get that information?

Dr. DERTHICK. Yes, sir. We can get information on education in Red China where they are likewise using it as an instrument in the cold war and we need to know what they are doing.

Senator THYE. Do you mean that you could put personnel in there?

Dr. DERTHICK. Well, we have approached it in several ways. One way is that there are specialists that would be available to us in the United States who have come out of Red China who know the educational system very well.

There are many records and reports that are available to us from certain govermental agencies where we do a considerable amount of our research and then it is possible, as I understand it, Dr. Goodykoontz, through Hong Kong, to get people in and out who would give us the information that we want.

So this is our proposal in international education and we are most anxious that that cut not be sustained.

Senator HILL. I might say, Doctor, that we have had testimony before the Labor and Public Welfare Committee also that, just as we got an awful shock when the Russians put the sputnik up, if we are not diligent we are going to get a shock about some things that are going to come out of China.

Dr. DERTHICK. That is right. Fortunately, the Office of Education had been working on this report on education in the U. S. S. R. for about 2 years before sputnik came up so that our report there was very timely, but it had to be done at great sacrifice and tremendous effort with a lot of people giving overtime freely.

If we do not get busy about Red China education we are going to get cut short.

I believe the State Department has asked for studies on 51 countries. This proposal is to carry forward those studies. We hope that the cut there will not be sustained.

PUBLICATION SERVICES

To assist in servicing an increasing workload resulting from meeting the demands for educational information, an increase of $33,670 is requested which includes provision for four new positions.

Of course, after we do all those studies that is our means for reporting the information to the agencies.

Senator HILL. That is to make it available.

Dr. DERTHICK. Yes, sir; to make it available.

RESEARCH SERVICES

RESEARCH PROJECTS

The amount requested will permit the financing of cooperative agreements approved in fiscal years 1957 and 1958 and new agreements in the amount of $500,000.

EFFECT OF HOUSE ACTION

The House allowance of $7,800,000 represents a reduction of $150,000 below our estimate. While we are pleased with the comments and recommendations of the House, and they did encourage us, and some progress can be made, the reduction would necessitate the curtailment of high priority projects to the extent of $100,000 and 10 positions. We are appealing for the restoration of this amount.

CIVIL-DEFENSE ACTIVITIES

The estimate includes $50,000 for civil-defense activities, which we are no longer requesting be included in this appropriation. It is our understanding that the Administrator of Civil Defense will request the Independent Offices Subcommittee to include funds in the Federal civil-defense appropriation for allocation to the agencies to whom certain civil-defense functions have been delegated.

The Office of Education has carried on some very important ones in the past.

Mr. Chairman, that is the extent of our presentation.

Senator HILL. Are there any questions, Senator Thye?

Senator THYE. I have no questions.

Senator HILL. We want to thank you very, very much, gentlemen. We are happy to have had you here with us.

Dr. DERTHICK. It has been a pleasure, as usual.

Thank you, Mr. Chairman.

OFFICE OF VOCATIONAL REHABILITATION

GRANTS TO STATES AND OTHER AGENCIES

STATEMENT OF MISS MARY E. SWITZER, DIRECTOR, ACCOMPANIED BY JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

Grants to States and Other Agencies

"[Grants to States and other agencies:] For grants to States and other agencies in accordance with the Vocational Rehabilitation Act, as amended, [$45,100,000] *$50,600,000*, of which [$40,000,000] *$45,500,000* is for vocational rehabilitation services under section 2 of said Act: $1,500,000 is for extension and improvement projects under section 3 of said Act; and $3,600,000 is for special projects under section 4 of said Act: *Provided*, That allotments

under section 2 of said Act to the States for the current fiscal year shall be made on the basis of $53,000,000, and this amount shall be considered the sum available for allotments under such section for such fiscal year.

"Grants to States, next succeeding fiscal year: For making, after May 31 of the current fiscal year, grants to States under sections 2 and 3 of the Vocational Rehabilitation Act, as amended, for the first quarter of the next succeeding fiscal year such sums as may be necessary, the obligations incurred and the expenditures made thereunder to be charged to the appropriation therefor for the fiscal year: *Provided*, That the payments made pursuant to this paragraph shall not exceed the amount paid to the States for the first quarter of the current fiscal year."

Amounts available for obligation

1958 appropriation	$46, 500, 000
1959 budget estimate	50, 600, 000
House allowance	50, 600, 000

Obligations by activities

Description	1958 appropriation	1959 budget estimate	House allowance
Vocational rehabilitation services	$41, 400, 000	$45, 500, 000	$45, 500, 000
Extension and improvement projects	1, 500, 000	1, 500, 000	1, 500, 000
Research grants and demonstrations	3, 600, 000	3, 600, 000	3, 600, 000
Total	46, 500, 000	50, 600, 000	50, 600, 000

Obligations by objects

	1958 appropriation	1959 budget estimate	House allowance
11 Grants, subsidies, and contributions	$46, 500, 000	$50, 600, 000	$50, 600, 000

Summary of changes from 1958

1958 actual appropriation	$45, 100, 000
1958 supplemental appropriation	1, 400, 000
Total appropriation	46, 500, 000
1959 appropriation request	50, 600, 000
Net change requested	+4, 100, 000

For program items

Vocational rehabilitation services:

1959 budget estimate	$4, 100, 000
House allowance	4, 100, 000

EFFECT OF HOUSE ACTION

The House bill would appropriate the same amounts as requested in the President's budget. However, the House action increased the base for allotting grants to the States from $53 million to $56 million to encourage a more rapid expansion of the program. The committee stated that the increase "will enable those States, who have continued to increase their own appropriations, to receive the full amount of Federal funds to which they are entitled under the formula in the basic Vocational Rehabilitation Act."

Just what effect the increase in the allotment base will have on the Federal funds eventually required for 1959 cannot be estimated accurately at this time. Whether a later supplemental request will be necessary will be largely dependent upon the final appropriation action taken by the 21 States whose legislatures are now in session.

APPROPRIATION ESTIMATE

"TRAINING AND TRAINEESHIPS

"[Training and traineeships:] For training and traineeships pursuant to section 4 of the Vocational Rehabilitation Act, as amended, and for carrying out the training functions provided for in section 7 of said Act, [$4,400,000] *$4,800,000.*"

Amounts available for obligation

	1958 appropriation	1959 budget estimate	House allowance
Appropriation	$4,400,000	$4,800,000	$4,800,000

Obligations by activities

Description	1958 appropriation	1959 budget estimate	House allowance
Teaching grants	$2,200,700	$2,442,000	$2,442,000
Traineeships	2,199,300	2,358,000	2,358,000
Total	4,400,000	4,800,000	4,800,000

Obligations by objects

	1958 appropriation	1959 budget estimate	House allowance
02 Travel	$25,000	$25,000	$25,000
07 Other contractual services	85,000	100,000	100,000
11 Grants, subsidies, and contributions	4,290,000	4,675,000	4,675,000
Total	4,400,000	4,800,000	4,800,000

Summary of changes from 1958

1958 actual appropriation	$4,400,000
1959 appropriation request	4,800,000
Net change requested	+400,000

	1959 budget estimate	House allowance
For program items:		
Teaching grants	$241,300	$241,300
Traineeships	158,700	158,700
Total	400,000	400,000

APPROPRIATION ESTIMATE

"*SALARIES AND EXPENSES*

"[Salaries and expenses:] For expenses necessary in carrying out the provisions of the Vocational Rehabilitation Act, as amended, and of the Act approved June 20, 1936 (20 U. S. C., ch. 6A), as amended, [$1,330,000] *$1,400,000.*"

Amounts available for obligation

	1958 appropriation	1959 budget estimate	House allowance
Appropriation	$1,330,000	$1,400,000	$1,400,000

Obligations by activities

Description	1958 appropriation		1959 budget estimate		House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
State plans, grants, and program evaluation	85	$668,863	87	$727,406	87	$727,406
Specialized services to States	35	300,629	37	317,712	37	317,712
Research grants and demonstrations	8	67,434	8	70,978	8	70,978
Training and traineeships	8	72,379	8	72,612	8	72,612
Administration	29	210,695	29	211,292	29	211,292
Total obligations	165	1,320,000	169	1,400,000	169	1,400,000
Unobligated balance—reserve for savings		10,000				
Total obligations and balance		1,330,000		1,400,000		1,400,000

Note:

	1958	1959
Permanent positions	157	160
PHS commissioned officers	8	9
Total budgeted positions	165	169

Obligations by objects

	1958 appropriation	1959 budget estimate	House allowance
Total number of permanent positions	157	160	160
Full-time equivalent of all other positions	1	1	1
Average number of all employees	149	154	154
Number of employees at end of year	157	160	160
Direct obligations:			
01 Personal services	$1,059,563	$1,124,722	$1,124,722
02 Travel	90,000	90,000	90,000
03 Transportation of things	1,500	1,500	1,500
04 Communication services	24,255	25,400	25,400
05 Rent and utility services	1,500	1,500	1,500
06 Printing and reproduction	26,000	29,600	29,600
07 Other contractual services	35,170	35,500	35,500
08 Supplies and materials	10,700	11,000	11,000
09 Equipment	10,110	10,600	10,600
11 Grants, subsidies, and allowances:			
Contribution to retirement fund	60,000	68,408	68,408
13 Refunds, awards, and indemnities	150	150	150
15 Taxes and assessments	1,052	1,620	1,620
Total obligations	1,320,000	1,400,000	1,400,000

Summary of changes from 1958

	Positions	Amount
1958 actual appropriation	165	$1,330,000
Deduct:		
Unobligated balance, reserve for savings		−10,000
Nonrecurring equipment costs		−1,500
Revised 1958 base	165	1,318,500
1959 appropriation request	169	1,400,000
Net change requested	+4	+81,500

	1959 budget estimate		House allowance	
	Positions	Amount	Positions	Amount
Increases:				
For mandatory items:				
Retirement contributions, annualization of 1959 base (rate of 6.5 percent in 1959, 6.275 in 1958)		$3,611		$3,611
Annualization costs for 19 additional positions authorized in 1958		57,428		57,428
Subtotal		61,039		61,039
For program items:				
For improved administration of State plans, grants, and program evaluation	2	8,698	2	8,698
For improved medical services and services to the blind	2	11,763	2	11,763
Total change requested	4	81,500	4	81,500

New positions requested, fiscal year 1959

	Grade	Annual salary
State plans, grants, and program evaluation:		
Research analyst	GS-9	$5,440
Fiscal analyst	GS-7	4,525
Subtotal (2)		9,965
Specialized services to States:		
Medical consultant [1]	Commissioned officer	10,000
Vocational rehabilitation specialist	GS-11	6,390
Subtotal (2)		16,390
Total new positions, all activities (4)		26,355

[1] Commissioned officer to be on reimbursable detail from the Public Health Service.

Comparison of Federal grants and State funds under selected allotment bases

State or Territory	Appropriation required to use all State funds		Allotment base of $53,000,000		Allotment base of $56,000,000	
	State funds reported [1] (1)	Federal grants (2)	State funds (3)	Federal grants (4)	State funds (5)	Federal grants (6)
Total	$29,657,370	[2] $48,545,074	$27,918,415	$45,513,433	$28,480,464	$46,400,829
Alabama	742,064	1,384,620	742,064	1,384,620	742,064	1,384,620
Arizona	238,607	415,257	213,147	368,856	226,544	393,272
Arkansas	618,069	1,232,417	563,253	1,104,510	594,586	1,177,621
California	2,177,864	2,750,458	2,151,124	2,722,781	2,177,864	2,750,458
Colorado	260,460	435,105	260,460	435,105	260,460	435,105
Connecticut	272,234	416,791	209,397	353,954	209,410	353,967
Delaware	132,833	203,076	109,983	180,226	108,497	[3] 178,740
Florida	1,017,240	1,754,186	928,766	1,593,015	970,646	1,669,308
Georgia	1,406,255	2,632,164	1,190,079	2,127,749	1,233,751	2,229,651
Idaho	83,634	155,148	83,634	155,148	83,634	155,148
Illinois	1,258,540	1,848,197	1,258,540	1,848,197	1,258,540	1,848,197
Indiana	325,000	514,167	325,000	514,167	325,000	514,167
Iowa	459,648	694,210	459,648	694,210	459,648	694,210
Kansas	308,321	550,811	308,321	550,811	308,321	550,811
Kentucky	622,122	1,382,171	213,764	429,331	225,943	457,750
Louisiana	724,771	1,522,133	703,128	1,471,613	724,771	1,522,113
Maine	197,304	381,027	147,192	280,563	156,456	299,134
Maryland	412,323	472,677	412,323	472,677	412,323	472,677
Massachusetts	608,117	792,877	591,672	772,409	608,117	792,877
Michigan	880,699	1,473,652	880,699	1,473,652	880,699	1,473,652
Minnesota	605,781	982,758	595,495	965,191	605,781	982,758
Mississippi	457,373	917,395	457,373	917,395	457,373	917,395
Missouri	565,895	965,515	565,895	965,515	565,895	965,515
Montana	93,045	190,032	93,045	190,032	93,045	190,032
Nebraska	185,240	329,178	185,240	329,178	185,240	329,178
Nevada	21,577	37,714	21,577	37,714	21,577	37,714
New Hampshire	62,839	113,154	62,839	113,154	62,839	113,154
New Jersey	988,505	1,215,339	803,552	1,030,386	852,898	1,079,732
New Mexico	105,882	179,957	105,882	179,957	105,882	179,957
New York	2,828,044	3,481,113	2,736,095	3,384,100	2,828,044	3,481,113
North Carolina	944,952	1,860,297	944,952	1,860,297	944,952	1,860,297
North Dakota	113,448	221,611	113,448	221,611	113,448	221,611
Ohio	459,409	791,730	459,409	791,730	459,409	791,730
Oklahoma	560,947	1,012,087	560,947	1,012,087	560,947	1,012,087
Oregon	388,705	586,651	386,862	583,890	388,705	586,651
Pennsylvania	2,457,686	3,624,606	2,340,169	3,458,950	2,457,686	3,624,606
Rhode Island	166,664	264,218	154,874	248,248	163,652	260,138
South Carolina	436,918	910,138	436,918	910,138	436,918	910,138
South Dakota	121,048	254,153	115,159	240,411	121,048	254,153
Tennessee	798,100	1,676,235	798,100	1,676,235	798,100	1,676,235
Texas	734,325	1,424,379	734,325	1,424,379	734,325	1,424,379
Utah	80,150	192,800	80,150	192,800	80,150	192,800
Vermont	128,096	230,172	102,103	176,554	106,202	185,010
Virginia	637,270	1,165,223	637,270	1,165,223	637,270	1,165,223
Washington	598,082	797,548	554,583	741,848	582,329	777,377
West Virginia	660,000	1,300,483	591,765	1,141,265	615,189	1,195,922
Wisconsin	782,519	1,310,656	782,519	1,310,656	782,519	1,310,656
Wyoming	61,734	114,093	58,247	108,879	61,734	114,093
Alaska	78,754	126,578	75,799	122,145	78,754	126,578
Hawaii	111,823	191,719	111,149	190,707	111,823	191,719
Puerto Rico	354,934	586,141	354,934	586,141	354,934	586,141
Virgin Islands	7,881	18,389	7,881	18,389	7,881	18,389
District of Columbia	292,992	413,691	117,962	238,661	115,994	[3] 236,693
Guam	20,647	48,177	19,703	45,973	20,647	48,177

[1] As reported by the States through Jan. 14, 1958.

[2] An allotment base of in excess of $150,000,000 would be required to distribute $48,545,074 among the States as detailed in this column.

[3] Delaware and the District of Columbia are "floor" States and receive a slightly higher allotment on a $53,000,000 base than on a $56,000,000 base, since the percentage of redistribution under section 2 (a) (5) (B) of the Vocational Rehabilitation Act is less on a $56,000,000 allotment base than on a $53,000,000 allotment base.

Extension and Improvement Projects, sec. 3 of the Vocational Rehabilitation Act [1]

State or Territory	1957 actual	1958 estimate	1959 estimate
Total	$1,206,356	[2] $1,500,000	[2] $1,500,000
Alabama	26,885	27,224	27,224
Arizona	[3] 8,689	9,178	9,178
Arkansas	[3] 15,862	15,761	15,761
California	[3] 115,541	116,647	116,647
Colorado	11,524	13,998	13,998
Connecticut	19,772	19,381	19,381
Delaware	[3] 5,000	5,000	5,000
Florida	[3] 30,606	32,737	32,737
Georgia	[3] 32,104	32,234	32,234
Idaho	----------	5,428	5,428
Illinois	36,120	81,905	81,905
Indiana	26,480	38,321	38,321
Iowa	[3] 23,868	23,377	23,377
Kansas	[3] 18,264	18,261	18,261
Kentucky	[3] 26,642	26,198	26,198
Louisiana	----------	26,086	26,086
Maine	[3] 8,024	7,902	7,902
Maryland	----------	24,419	24,419
Massachusetts	[3] 44,472	41,786	41,786
Michigan	[3] 64,155	65,266	65,266
Minnesota	22,428	28,144	28,144
Mississippi	----------	18,444	18,444
Missouri	18,563	36,949	36,949
Montana	[3] 5,612	5,540	5,540
Nebraska	12,172	12,279	12,279
Nevada	[3] 5,000	5,000	5,000
New Hampshire	[3] 5,000	5,000	5,000
New Jersey	15,700	46,918	46,918
New Mexico	2,925	7,077	7,077
New York	[3] 142,955	140,632	140,632
North Carolina	[3] 37,991	38,408	38,408
North Dakota	2,630	5,706	5,706
Ohio	35,023	78,986	78,986
Oklahoma	17,322	19,425	19,425
Oregon	[3] 14,797	14,918	14,918
Pennsylvania	[3] 98,935	95,208	95,208
Rhode Island	[3] 7,492	7,190	7,190
South Carolina	12,000	20,433	20,433
South Dakota	6,000	6,044	6,044
Tennessee	21,000	30,098	30,098
Texas	69,951	77,501	77,501
Utah	[3] 6,925	7,051	7,051
Vermont	[3] 5,000	5,000	5,000
Virginia	[3] 31,731	31,704	31,704
Washington	17,820	23,160	23,160
West Virginia	[3] 17,750	17,219	17,219
Wisconsin	32,751	32,686	32,686
Wyoming	----------	5,000	5,000
Alaska	[3] 5,000	5,000	5,000
District of Columbia	----------	7,520	7,520
Guam	----------	5,000	5,000
Hawaii	[3] 5,000	5,000	5,000
Puerto Rico	16,875	19,651	19,651
Virgin Islands	----------	5,000	5,000

[1] Amounts are allotted on basis of population and amounts cannot be reallotted. Matching is $1 State to $3 Federal.

[2] From information available Dec. 31, 1957, it appears that the following States will not use any of their allotment. In addition other States will not match the full allotment.

	1958	1959
Idaho	$5,428	$5,428
Louisiana	26,086	26,086
Maryland	24,419	24,419
Mississippi	18,444	18,444
Guam	5,000	5,000
Part of allotment not matched	66,231	51,864
Unmatched	145,608	131,241
Matched	1,354,392	1,368,759
Estimate	1,500,000	1,500,000

[3] States that earned full allotment in 1957.

State funds available for matching secs. 2 and 3 of the Vocational Rehabilitation Act

State or Territory	1957 actual	1958 estimate	1959 estimate
Total	$21,629,552	$25,793,322	$28,374,670
Alabama	702,560	751,139	751,139
Arizona	165,105	197,300	216,206
Arkansas	466,636	568,507	568,507
California	1,547,771	1,857,774	2,189,638
Colorado	173,204	186,552	265,126
Connecticut	225,425	215,857	215,857
Delaware	114,642	111,650	111,650
Florida	650,359	917,952	939,678
Georgia	1,096,265	1,200,824	1,200,824
Idaho	50,653	78,310	83,634
Illinois	951,202	1,135,842	1,285,842
Indiana	302,327	337,773	337,773
Iowa	402,241	467,440	467,440
Kansas	202,412	266,848	314,408
Kentucky	192,205	222,497	222,497
Louisiana	508,603	655,820	703,128
Maine	120,375	149,826	149,826
Maryland	345,889	372,367	412,323
Massachusetts	465,819	559,126	605,601
Michigan	688,187	794,584	902,454
Minnesota	505,880	576,985	602,972
Mississippi	305,393	312,115	457,373
Missouri	421,988	475,894	578,082
Montana	86,022	94,554	94,892
Nebraska	141,423	189,333	189,333
Nevada	16,534	23,244	23,244
New Hampshire	51,632	54,235	64,506
New Jersey	581,530	786,659	819,191
New Mexico	99,488	102,968	105,882
New York	1,771,674	2,512,868	2,782,972
North Carolina	774,137	857,931	957,755
North Dakota	120,255	115,350	115,350
Ohio	398,701	471,593	473,994
Oklahoma	411,274	498,528	567,422
Oregon	287,831	331,386	391,240
Pennsylvania	2,065,379	2,104,214	2,371,905
Rhode Island	138,694	157,271	157,271
South Carolina	322,192	296,738	443,543
South Dakota	80,611	117,171	117,171
Tennessee	459,406	680,875	808,133
Texas	546,250	754,876	760,159
Utah	90,005	82,500	82,500
Vermont	96,177	103,770	103,770
Virginia	557,585	630,935	647,838
Washington	430,277	562,304	562,303
West Virginia	437,717	530,900	597,505
Wisconsin	460,805	618,936	793,413
Wyoming	48,367	59,914	59,914
Alaska	63,995	61,665	77,466
District of Columbia	121,925	120,469	120,469
Guam	(1)	10,000	19,703
Hawaii	104,677	106,443	112,816
Puerto Rico	256,984	333,985	361,484
Virgin Islands	2,864	8,725	9,548

[1] No 1957 allotment for Guam.

PREPARED STATEMENT

Senator HILL. Miss Mary E. Switzer, Office of Vocational Rehabilitation.

Miss Switzer, we will be happy to have you proceed in your own way.

We will put your statement in full in the record.

(The statement referred to follows:)

STATEMENT OF DIRECTOR, OFFICE OF VOCATIONAL REHABILITATION

There has been encouraging progress in the development of vocational rehabilitation during the fiscal year 1957 and the first half of the current fiscal year. At the same time, we have been laying the groundwork for further progress in the next few years, both in the quality and the quantity of rehabilitation services for the disabled men and women of the Nation. I am pleased

to report that the development of this program has been enthusiastically supported by the great majority of the States, public leaders, and nongovernmental groups.

Number rehabilitated.—The total number of persons rehabilitated into useful employment in 1957 reached a record high with 71,607 rehabilitated, compared with 66,300 in 1956.

Number of disabled served.—The total number of disabled people served has increased from 221,518 in 1956 to 238,592 in 1957—or an 8 percent increase.

State financial support.—The increase in State financial support of this program continues, with the State funds available during this present year being almost 19 percent higher than in 1957, and 86 percent higher than in 1954.

The rehabilitation of older citizens.—For several years this program has devoted an increasing proportion of its efforts and resources to restoring disabled older persons to activity and usefulness. For example, 7,344 disabled persons age 45 or over were rehabilitated through this program in 1945. By 1953 the total was 15,568 and in 1957 it reached 21,086. We expect that during the next few years our work with disabled persons applying for old-age and survivors' insurance disability benefits will have a pronounced influence on this whole field of rehabilitation for older persons.

The severely disabled.—More than 21,000 severely disabled persons were restored to activity and employment by the State agencies in 1957, or 11 percent more than the 19,000 such persons rehabilitated in 1956.

More rehabilitation centers.—The expenditures by State agencies to establish rehabilitation facilities and workshops—an important indication of the potential for rehabilitating the severely disabled now and in the future—increased to more than $1,750,000, or 237 percent more than the amount expended for this purpose during 1956.

More use of rehabilitation centers.—In 1957, 6,880 disabled clients of State agencies received services in rehabilitation centers or in adjustment centers for the blind. In 1955 only 2,436 clients received such services. This is another important index to the rising rate of service which the State agencies are providing for severely disabled people.

Reducing public dependency.—Among those rehabilitated in 1957 were approximately 14,000 disabled men and women who had been receiving public assistance.

Research projects and demonstrations.—During 1957 grants were made to support 82 research projects and demonstrations designed to secure new knowledge and improved methods for rehabilitating more disabled men and women.

During the current fiscal year a national demonstration program has been initiated to take the favorable results obtained in earlier research projects and apply them on an organized basis in selected settings elsewhere in the country. The effectiveness of these new methods and techniques, developed through the research program, are being demonstrated in a variety of projects, the majority of them geared toward the specialized needs of those who are mentally retarded, the cerebral palsied, and other severe disability groups.

Extension and improvement.—State participation in the extension and improvement grant program continued at a high level. During 1957, 46 States conducted 109 different projects to improve the quality and quantity of their rehabilitation services.

Training professional personnel in rehabilitation.—There has been a steady and sound growth of the training program to produce more professional personnel in rehabilitation, with larger numbers of rehabilitation counselors, physicians in rehabilitation, and others now pursuing long-term courses of study. 1958 marked the beginning of our first national program of grants in support of training speech and hearing therapists, with about $200,000 being devoted to this purpose this year.

THE PACE OF PROGRESS

Like many other phases of our national life, the vocational rehabilitation program is undergoing changes at an unprecedented rate. At a time when the advent of missiles and satellites has upset the timetables of scientific developments, the rush of events in rehabilitation has made equally obsolete the slow evolution by which gains were made in earlier years. Fortunately, the sharply increased demands upon the Federal-State rehabilitation program to serve more disabled people, and particularly to bring into the stream of active life and usefulness those who are severely impaired, has been accompanied by a tremendous surge in research, with new developments which are giving us new tools with which to meet these demands. We feel an obligation to play our full role in

meeting the challenges of this exciting period in which we live, for the social, economic, and educational development of our citizens, as individuals, will ultimately determine the rate of our progress in science.

Research

Nowhere is the progress more strikingly evident than in the research program in rehabilitation. In fact, research is the only window through which we can get a clear picture of what has happened and a glimpse into the nature and direction of rehabilitation in the coming years.

For example: A number of the most severely crippling conditions (such as cerebral palsy, Parkinsonism, and others) often produce such violent and uncontrolled body movements and tremors that rehabilitation efforts are extremely difficult or impossible. During the last 2 years, a brilliant young neurosurgeon has developed a surgical technique by which these involuntary movements may be halted in a high percentage of victims of Parkinsonism. More recent work has shown encouraging results in using this same technique for cerebral palsy patients. Through a research grant from this Office, this neurosurgeon last year began a series of studies to determine the rehabilitation procedures and methods which are necessary in order to begin the muscle reeducation and other physical retraining procedures, as well as social and educational services to permit these people to prepare for lives of activity and usefulness.

Through another grant, an organization in California established a special workshop to study the possibility of employing epileptics with seizures so severe that they may not be brought under control by medication. As a result of this project, 40 such epilepsy victims are not only producing essential electronic mechanisms for guided missiles today—but their safety record has been so outstanding that the workmen's compensation insurance rate was voluntarily reduced by the carrier.

As a result of another research grant, we now have, for the first time in history, a complete manual outlining rehabilitation methods for deaf-blind persons, keyed to modern knowledge. At the same time, investigations have been undertaken by scientists of England, Canada, Holland, and this country in an effort to devise improved methods of communication for deaf-blind persons.

With strokes, and the resulting disability of hemiplegia, being one of the greatest sources of disablement in this country, research has been undertaken to analyze in detail the energy expenditure required for patients in undergoing the basic physical medicine procedures involved in physical rehabilitation.

In another project, a State vocational rehabilitation agency is doing an exhaustive study of State agency operations, designed to produce better organizational and operating methods which will make more efficient use of State staff.

In several types of projects, the results have been so favorable that it has seemed highly advisable to (1) test their validity under controlled circumstances in other settings in other communities and institutions, and (2) disseminate this information to other organizations and communities. We have undertaken, therefore, a program of grants for selected demonstration projects, through which a number of institutions and agencies are conducting their own demonstration projects designed on the basis of the original prototype project.

Prosthetics

This field of work is so basic and so important to the whole rehabilitation movement that this Office has given special attention to it in recent years. Involved in this field are all the major aspects of the work of this Office—the provision of rehabilitation services to disabled persons, an intensive program of research and development and the training of professional personnel in the modern features and methods related to prosthetics.

In appropriating funds for 1958, Congress included $200,000 for a prosthetics education program. This work is being carried out at New York University and the University of California at Los Angeles. During the current fiscal year, we expect that about 600 professional workers—physicians, surgeons, physical therapists, occupational therapists, and prosthetists—will complete these intensive short-term courses and return to their communities with a much higher level of skill in serving amputees.

Today research in prosthetics is one of the most volatile fields in rehabilitation. Through a recent grant, we expect that developmental work will be undertaken on a new type of upper-arm prothesis which may be the first major breakthrough in providing upper-arm mobility for those with flail arm conditions. Through

another project, a systematic plan of investigation in search of new and improved self-help devices is being undertaken, in order that the gadgetry of recent years, which has already accomplished so much in the rehabilitation of thousands of people with severe conditions, may be capitalized on in a more organized and scientific manner.

We recently established a formal working relationship with the Prosthetics Research Board of the National Research Council-American Academy of Sciences. Through this arrangement, this office will have the benefit of consultation with the board in the development of our policies and projects in research which bear upon the general field of prosthetics.

Rehabilitation of the especially difficult cases

For several years, this office, in its work with the State rehabilitation agencies, has constantly stressed the importance of reaching and rehabilitating those persons whose disabilities were severe and who therefore have little prospect of becoming active and useful unless the public program undertakes to serve them. Out of this experience has come a better understanding of the many and varied factors which can constitute an especially difficult case and which strongly influence success or failure in rehabilitation.

As the vocational rehabilitation program has moved deeper into the problem of severe disability, we have learned, as administrators, to be cautious in classifying disabilities under the heading of "severe" on the basis of diagnostic group. Within a diagnostic group, such as hemiplegia, cerebral palsy, mental retardation, arthritis, and many others, the degree of disability must be clear before one knows whether he is dealing with a severe disability. Other factors within the individual such as personality and motivation; factors outside the individual such as family problems, rehabilitation resources, social opportunity, transportation, and employment opportunities—all these may present greater obstacles to employment than the disability itself. A highly motivated person with severe crippling arthritis may be easier to reestablish in employment than a hard-of-hearing person who is afraid to admit the loss of hearing, and who is embarrassed to wear a hearing aid.

However, it is desirable—again as an administrator—to use some sort of yardstick to gain a rough picture of the extent to which this program is grappling with the rehabilitation problems of severely disabled persons. On this basis, we may include among the more difficult cases amputees who have lost 2 or more limbs; individuals with impairments of 2 or more extremities (including the cerebral palsied), the back or the head, persons who are blind in both eyes, the emotionally ill, the mentally retarded, and those with epilepsy.

Experience and progress of the State agencies.—Today, State vocational rehabilitation agencies have greater knowledge and more facilities for serving these especially difficult cases than at any time since the inception of the program. And they are making use of this knowledge and these facilities in serving these disabled people in ever-increasing numbers. More than 21,000 of the persons rehabilitated in 1957 had disabling conditions as described above. Of these rehabilitants, 456 were amputees with the loss of 2 or more limbs; 11,338 were persons with serious impairments of 2 or more limbs (including those with cerebral palsy), 4,005 were blind, 1,094 were mentally retarded persons, 2,796 were mentally ill, and 1,520 were epileptics. The number of such disabled persons rehabilitated in 1956, the previous year, was slightly in excess of 19,000. Thus, there was an increase of about 11 percent in the number of rehabilitants who would comprise the especially difficult cases over the 1-year period.

Selected demonstrations.—In this present fiscal year, 23 selected demonstration projects, designed to apply improved rehabilitation methods and techniques to the vocational rehabilitation of selected groups of severely disabled persons, have been approved. Nine of these provide for the introduction of demonstration occupational training centers for the mentally retarded, 4 are industrial work programs for the homebound chronically ill, 3 provide for work adjustment programs for disabled persons with emotional disorders; 1 provides occupational adjustment services for epileptics; 1 is a work classification and evaluation center for the cerebral palsied; and 5 are optical aids clinics for the visually handicapped. All of these projects have been developed with the assistance and cooperation of the State vocational rehabilitation agencies.

In the research program, many of the current projects are seeking solutions to the rehabilitation problems of epileptics, the mentally retarded, the blind, the mentally ill, the cerebral palsied and the homebound.

Extension and improvement projects.—At present, State agencies are conducting 42 extension and improvement projects which emphasize services to the

more difficult cases. Of these, 17 are for the emotionally ill, 6 for the mentally retarded, 2 for epileptics, 2 for the cerebral palsied, 9 for the blind, and 6 for the homebound.

Services for the severely disabled in rehabilitation centers.—Another indication of the attention State agencies are giving to these more difficult cases is the number of persons provided services in rehabilitation centers and the amounts of public agency funds being expended for services at these centers. In 1955, the States spent about $850,000 for services for 2,436 clients in rehabilitation and adjustment centers. By 1957 this had increased to more than $2,122,000 for services provided 6,880 clients at such centers.

Rehabilitation services for older people

This Office feels deeply its share of responsibility for the welfare, happiness, and usefulness of our older citizens. Within the broad setting of the social, vocational, recreational, and economic questions which surround us as a society, in which the number of older persons is constantly increasing, the vocational rehabilitation program represents, we believe, an important tool in creating better futures for our disabled citizens in their later years.

We are far from mastering this problem, even as it relates to the single question of disability and rehabilitation—yet the gains which have been made in recent years are concrete and encouraging. They are dwarfed only by our hopes for what this program may do in the next few years to open up new vistas for disabled people of advanced age.

For perspective, it should be noted that, among those rehabilitated in 1945, the median age at time of acceptance was 28. By 1953, the median age was 34. By 1957, it had risen further to 36.

In terms of numbers, 7,344 disabled individuals age 45 or over were rehabilitated through the public program in 1945. This represented 17.5 percent of the total rehabilitated that year. In 1953, the number had risen to 15,568 and represented 25.4 percent of the total for that year. In 1957, 21,086 were rehabilitated and the percentage was 29.7.

We have worked with the State rehabilitation agencies in a continuing study of the services provided to older people, in order to learn their individual State problems and to pass along to them the experience acquired in other States and that derived from research work. Our staff has devised and put into use a specific schedule for analyzing State agency data on cases, their policies and methods, and the factors which influence the decisions to serve or not to serve handicapped persons in their older years. Such studies have been completed in all the States of one region already; our plans call for extending this kind of cooperative analysis and consultation to the other States and regions of the country.

The specifics of this problem have been placed squarely before us as a result of our experience in carrying out the rehabilitation responsibilities involved in the 1954 and 1956 amendments to the Social Security Act, with respect to the disability freeze and disability cash payment provisions. Among the applicants so far, the median age has been 58, the disabilities have been quite severe, the complications of old age have been evident on all sides and the rehabilitation problems have been serious and difficult. During the next few years, this group alone will provide both a challenge and an illuminating laboratory in which we may determine the rate of progress of medicine, social welfare, and other groups, in coping with this whole question.

We have been heartened by the fact that several investigators have applied for and received research grants to investigative various phases—medical, vocational, etc.—of this problem as it relates to rehabilitation. In seeking answers to the problems of disabled persons of older years, we can make no better investment than the support of research which will break down the barriers now imposed by lack of knowledge.

The rehabilitation program and the OASI disability benefits program

The social security amendments of 1954, which protect the benefit rights of disabled workers, and the amendments of 1956 which provide cash payments to disabled workers age 50 and over and to disabled children age 18 and over, stipulate that as many as possible of these beneficiaries be rehabilitated. The amendments further provide that disability payments may be reduced or suspended for beneficiaries who, without good cause, refuse rehabilitation services. The Congress also indicated the State vocational rehabilitation agencies as the State agencies of choice for making the disability determinations. In all

but four States, the vocational rehabilitation agencies are acting as agents of the Bureau of Old-Age and Survivors Insurance in the disability determination process.

The Office of Vocational Rehabilitation, the Bureau of Old-Age and Survivors Insurance of the Social Security Administration, and the State vocational rehabilitation agencies have established jointly an objective for providing the following services for every applicant for disability benefits: (1) A prompt determination of disability based on a complete evaluation of pertinent medical and nonmedical facts, (2) an assessment of his rehabilitation potential, and (3) all rehabilitation services available under the State-Federal vocational rehabilitation program to enable him to return to suitable paid employment, if it is determined that he has a favorable rehabilitation potential. In each State vocational rehabilitation agency, a rehabilitation evaluation process has been established to assure that each applicant for disability benefits will have an opportunity for rehabilitation services where appropriate.

As of November 30, 1957, State agencies had 787 full-time personnel assigned to OASI work. This is more than double the staff engaged in this work in the preceding year. Staffing has been a serious problem. The task of recruiting and training new State agency staff has been very difficult. The existing staff is just about able to handle current intake, but are confronted with a large backlog.

The State vocational rehabilitation agencies are faced with a tremendous task in reviewing the OASI applications referred for rehabilitation assessment. In 1956, there were 75,134 disability applicants screened by the State agencies; in 1957, there were 154,241 and in the first 5 months of this current year 142,453—almost the equivalent of last year's total. Some of the characteristics of disability beneficiaries, as revealed by sample studies, give some indication of the problems that confront State agencies in providing rehabilitation services. The median age of disabled worker beneficiaries is 58.1 years at the time of application; 57 percent of them are institutionalized, bedfast or nonambulatory, while 38 percent of the children beneficiaries are in this condition. About 50 percent of the children beneficiaries have had no formal education and 2 out of 3 are, to some degree, mentally retarded.

For many of the disabled worker and children beneficiaries, special rehabilitation services are needed that can only be provided in vocational rehabilitation centers, workshops, and work adjustment centers. The mentally retarded particularly need the services that work adjustment centers provide, i. e., training in basic work habits, building of personal confidence, learning to work with others, travel training, etc. Also, for the worker beneficiaries who are, for the most part, in the upper age brackets, a great deal of promotional work must be done to develop job opportunities for them.

Despite the fact that the OASI disability applicant group represents the more severely disabled and difficult group from the rehabilitation standpoint, progress is being made in serving this group. A study of 3,594 disability applicants whose rehabilitation services were completed or terminated between April 1956 and September 1957, shows that over 1,000 or 29 percent of such applicants were successfully rehabilitated.

Shortages of professional personnel

When the Congress passed the vocational rehabilitation amendments of 1954, it provided for a program of training grants to help overcome the serious shortages which in recent years have impeded the growth of services to disabled people. As the vocational rehabilitation program, along with other voluntary agencies in the field, has attacked the problems of disability on a wider front—and particularly made greater effort to do something constructive about those with very severe conditions—the demands for competent, well-trained professional personnel have mounted steadily. To date, the results of the training program administered by this office have been felt on all of the professional fronts where the shortages are most acute—among physicians in rehabilitation, physical therapists, rehabilitation counselors, and other workers. This year we have entered another field where distressing shortages have seriously impeded the development of rehabilitation centers and agency programs—speech and hearing.

Except for physicians, most of the formal (or long term) training to prepare a professional worker requires 2 years of graduate work, usually leading to a master's degree. In developing and carrying out this training program, we have had outstanding cooperation and support from the many universities across the

country who participate. Their response to the needs for more and better personnel to staff rehabilitation service activities has been most heartening.

These teaching institutions, as required by our act, contribute a portion of the cost of developing and conducting these graduate courses. In this connection, we have considered it desirable to allow not more than 8 percent to cover the indirect costs of teaching institutions. Our grants are made to cover only a part of the cost of conducting training programs and it is expected of the teaching institutions that they include in the sponsor's contributions any additional indirect costs required. In this we have had the acceptance of the universities with which we work. We are looking forward to the results of the extensive studies currently under way by committees of both the Congress and the executive branch, on indirect costs in certain governmental grant programs.

This year 25 medical institutions are cooperating through OVR traineeship grants to provide residency training for physicians who plan to specialize in the medical specialty of physical medicine and rehabilitation. About 135 of these physicians are receiving their residency training under the traineeship grant program of our office. Bearing in mind that these physicians are pursuing 3-year residency training courses, and in view of the best estimates of key positions vacant at present, which is about 500, we still have not reached the point where current or future needs are being provided for. However, very definite gains in that direction have been made and I am confident the basic plan we are pursuing is sound and will achieve the results we seek.

In the preparation of rehabilitation counselors, we can report excellent progress, both in quality of instruction and in the numbers being trained. About 500 students of rehabilitation counseling are pursuing their graduate work under OVR traineeships. We estimate that, at present, about 300 new trained rehabilitation counselors can be expected to complete their studies and be ready for employment each year. This takes into consideration the fact that this is a 2-year course; that other students not receiving traineeships are pursuing the same graduate work in rehabilitation counseling; and that allowances must be made for loss through discontinued studies, deaths, changes in curricula, those who pursue further graduate study to prepare for teaching in rehabilitation, etc.

In estimating needs—those of the State vocational rehabilitation agencies, including those required to carry out the OASI disability determination functions, and taking into consideration the estimated requirements of nongovernmental institutions and agencies for rehabilitation counselors—it appears that the present number completing their studies each year represent about half the anticipated need.

The launching of a program of training and traineeship grants for speech and hearing therapists this year marks the culmination of some 3 years of constant effort to lay the groundwork by which our training program could give constructive support in this shortage field. Although the beginning this year is modest, it is a sound beginning and will permit this office to develop its support consistent with the completion of plans of universities and others, to augment our teaching resources for this highly important professional field.

GRANTS TO STATES AND OTHER AGENCIES

The 1959 budget estimate includes $50.6 million for "Grants to States and other agencies," as follows: $45.5 million for basic vocational rehabilitation services under section 2 of the act; $1.5 million for extension and improvement projects under section 3; and $3.6 million for research grants and demonstrations under section 4.

Basic support grants

	1957 actual	1958 estimate	1959 estimate
State funds	$21, 227, 432	$25, 341, 855	$27, 918, 415
Federal grants	34, 847, 954	[1] 41, 400, 000	45, 500, 000
Total	56, 075, 386	66, 741, 855	73, 418, 415

[1] Includes anticipated supplemental estimate of $1,400,000.

The 1959 estimated requirements for vocational rehabilitation services under section 2 of the act is $45,500,000—an increase of $4,100,000 over 1958, or 10 percent.

With increased attention being given to the needs of the severely disabled, there has been a corresponding emphasis during the past 2 years on providing the means of serving them. Success in rehabilitating the more difficult cases hinges directly on the facilities available to the community for providing thorough evaluation and the multiplicity of specialized services required by these handicapped persons. Since the amendments to the Vocational Rehabilitation Act of 1954, $4.5 million in Federal vocational rehabilitation grants have been issued to assist in financing the enlargement, remodeling, alteration and equipment of rehabilitation facilities and workshops and the initial staffing to man such facilities. These facilities are receiving a growing number of clients. Since 1955, services purchased from rehabilitation facilities have increased almost 150 percent.

In 1957 State vocational rehabilitation agencies rehabilitated 70,940 persons. Voluntary agencies, with partial Federal support, accounted for an additional 667 rehabilitants. State plans call for 80,000 rehabilitants in 1958, and 85,000 in 1959. This expanding program is reflected in the growth of State funds for vocational rehabilitation—an increase of 86 percent in 1957 over that provided in 1954.

Despite serious staffing problems in State agencies, counseling man-years have increased 11 percent between 1956 and 1957—an increase from 1,442 to 1,605.

Based on the past few years' experience, further expansion of State counseling staff can be expected—in 1958 to 1,910 man-years, and 1959 to 2,025 man-years.

In evaluating State progress during 1957, consideration must be given to the higher cost of services—attributable to increased prices, more intensive services per client, and the larger number of clients receiving services at rehabilitation and adjustment centers.

Allotment base.—The allotment base for the support program was tied into the amount authorized under the Vocational Rehabilitation Act in previous years. 1959 is the first year for which the act does not specify a maximum appropriation authorization for grants. The continuation of the allotment base principle will narrow the gap between the allotment base and the funds appropriated, and will allow forward movement of the basic program while at the same time keeping Federal funds at the lowest figure consistent with actual State program plans. State estimates of funds available for 1959 (to match the appropriation request of $45,500,00 for support grants) were developed carefully, taking into consideration that 33 States have already made appropriations for the 1959 fiscal year.

State funds estimate.—In 1958, total State funds available for the support program amount to $25,341,855, an increase of 19 percent over the $21,227,432 available for fiscal year 1957.

In 1959, a total of $27,918,415 in State funds will be available—10 percent more than 1958. Thirty-three States have already appropriated funds for 1959. On the basis of experience, it is estimated that these States will account for 55 percent of the total amount of support grants under section 2 of the act. In the remaining States, which have yet to process their budget requests through the legislatures, individual State agency estimates have been carefully evaluated to provide the basis for our Federal grant request. On the basis of experience with growing State interest and financial support since the 1954 amendments to the Vocational Rehabilitation Act, we feel this request to be the best estimate available of State fiscal support for 1959.

Extension and improvement projects

	1957 actual	1958 estimate	1959 estimate
State funds	$402,119	$451,467	$456,255
Federal grants	1,206,356	1,354,392	1,368,759
Total	1,608,475	1,805,859	1,825,014
Federal allotment (appropriation)	1,500,000	1,500,000	1,500,000

The 1959 estimated requirement for extension and improvement projects under section 3 of the act is $1,500,000—the same amount as appropriated for 1958.

These grants provide the means to assist State vocational rehabilitation agencies in undertaking improvement of their rehabilitation services without diverting basic support funds necessary for expansion of their ongoing programs. By providing Federal support during the initial period of a project, these grants offer an incentive for the States to extend and improve their vocational rehabilitation services to the disabled.

Projects initiated to date cover a wide variety of fields of activity. In 1957, the 109 projects in effect in 46 States represented an increase of 65 percent over 1955. It is estimated that 110 such projects will be active during 1958 and 1959 in 49 States and Territories.

During 1957, extension and improvement projects were used to establish 19 rehabilitation facilities (including 4 centers for the blind, and 5 speech and hearing centers) and 12 workshops, 4 of which were for the blind. Other projects provided improved or specialized services to the blind (9), the mentally ill (10), homebound and other severely disabled (10), as well as 2 for epileptics, and numerous projects for many other disability groups.

On June 30, 1957, 30 extension and improvement projects completed their third and final year of operation under provisions of section 3 of the act.

Without exception, each of the activities developed under these projects has been incorporated in State agency operations conducted under the basic support provisions of the Vocational Rehabilitation Act.

For example, Nebraska, one of the States which previously served very few of the emotionally ill, has provided for the assignment of a specialized counselor to the mental health clinic and to a mental hospital in one of the larger cities in the State. Through the specialized intensive services that this counselor could provide, over 30 clients were served during the first year of operation of the project. Before services were provided these ex-mental patients were receiving an average of $6.50 per week in wages. After services they averaged over $46 per week—the extreme in income being from $20 per week to $100 per week. The agency is now conducting this program on an expanded basis under its basic support program. And Nebraska has replaced this project with a new project for the mentally retarded, a group which the State feels should also receive special attention.

Research grants and demonstrations

1957 actual	$1,999,046
1958 estimate	3,600,000
1959 estimate	3,600,000

An appropriation of $3.6 million is requested for grants for rehabilitation research and demonstration projects in 1959, the same as the amount appropriated for this purpose for 1958.

These grants are made under section 4 (a) (1) of the act to public agencies, educational institutions and other nonprofit organizations to partially support research and demonstration projects, primarily those concerned with developing methods and techniques for improving vocational rehabilitation services for the more severely disabled persons, particularly those not now being served. Although relatively new, the research grant program has been extended to solve many rehabilitation problems over a wide range of disability categories.

During 1957, a total of 74 new applications were reviewed by this Office and the National Advisory Council on Vocational Rehabilitation (which considers and makes recommendations on each grant application). Forty-eight new projects were approved and initiated in the amount of $1,101,964. Continuation grants were approved for 34 projects in the amount of $897,082. In 1958, grants totaling $2.4 million will be made for both new and continuing research projects and $1.2 million will support new selected demonstration projects for the severely disabled.

The selected demonstration program is one of the major developments in 1958—a means of applying advanced rehabilitation methods and techniques to the vocational rehabilitation of selected groups of severely disabled persons. Its objective is the prompt and widespread application of the results obtained from OVR research projects.

Demonstration projects have already been approved for 9 occupational training centers for the mentally retarded, 4 industrial work programs for the home-

bound chronically ill, 3 work adjustment centers for disabled persons with emotional disorders, and 5 optical aids clinics. The demonstration occupational training centers introduced for the first time in seven States are effective means of evaluating the employment potential and of providing services to mentally retarded young adults. With the establishment of optical aids clinics, many unemployed persons who have been classified as "blind" will have sufficient improvement of their vision to enter employment. It is expected that 40 selected demonstration projects will be approved this fiscal year.

Marked progress has been achieved in the rehabilitation research and development program. There is striking evidence that this area of the national program offers an effective means of advancing rehabilitation practices. Specific attainments show that some disabling conditions can be modified and others more effectively controlled. For example, one project has centered the efforts of all the medical disciplines in one institution on a new neurosurgical procedure for patients with involuntary movement disorders associated with Parkinsonism. This procedure has achieved marked progress in controlling involuntary movement disorders and indicates that this group of disorders may be passing from one of the most intractable conditions in the neurologic field to one which is becoming more amenable to therapy. This same technique is now being investigated with respect to cerebral palsy patients with similar problems.

Progress has been made in developing ways in which certain disability groups can be brought into useful employment and established in a better way of life. For example, 40 epileptics whose seizures cannot be brought under control are not only producing essential electronic mechanisms for guided missiles but their safety record has been so outstanding the workmen's compensation insurance rate was voluntarily reduced by the carrier. In a rural State, it has been demonstrated that many severely disabled persons, including those who are blind, can engage in industrial work in their homes. Methods and techniques have been developed to evaluate the productive capacities of severely involved cerebral palsied patients and persons who are mentally retarded.

We anticipate a continuing growth in the number of projects such as these. Of the $3.6 million requested for 1959, $3.1 million will support active projects approved in prior years. The remaining $500,000 will support an estimated 17 new projects to be selected from an estimated 200 grant applications. This will permit the maintenance of about 120 projects during the year—the same level as in 1958.

In approaching the fifth year of the research and development program, it has become evident that a variety of rehabilitation problems requiring systematic study are being identified, such as: Communication problems of the deaf-blind; the emotional impact of disability upon the individual; the factors which motivate individuals to undergo rehabilitation; and the need for more effective methods to rehabilitate the increasing numbers of persons being discharged from mental hospitals. There is a vast potential in the area of applied research in prosthetics and bracing. Current advances in electronic miniaturization opened up possibilities for major "breakthroughs" in the use of electronic power mechanisms in the operation and control of artifical appliances.

Progress to date in the selected demonstration project program indicates these projects stimulate community interest and action in developing and financially sponsoring appropriate facilities and services for hitherto neglected groups of the disabled. We are receiving an increasing number and variety of promising applications from the creative research talent of our universities, medical schools, and research organizations. Interest among these imaginative resources must be maintained by providing support for approval of a reasonable proportion of good grant applications.

Effect of House action

The House bill would appropriate the same amounts as requested in the President's budget. However, the House action increased the base for allotting grants to the States from $53 million to $56 million to encourage a more rapid expansion of the program. The committee stated that the increase "will enable those States, who have continued to increase their own appropriations, to receive the full amount of Federal funds to which they are entitled under the formula in the basic Vocational Rehabilitation Act."

Just what effect the increase in the allotment base will have on the Federal funds eventually required for 1959 cannot be estimated accurately at this time. Whether a later supplemental request will be necessary will be largely de-

pendent upon the final appropriation action taken by the 21 States whose legislatures are now in session.

GENERAL STATEMENT

Miss SWITZER. Thank you, Senator.

I assume that you want me to give you as brief and convincing a story as possible so that we can proceed with the encouragement of more and better rehabilitation services to many more people.

You and Senator Thye do not need any report of progress but I do think that it is very heartening to just have a couple of highlight figures for you.

Senator HILL. All right.

Miss SWITZER. We have had our best year since the development of the program, and we seem now to have really experienced the benefits of our new legislation in the tooling up period. The States have increased their appropriations 19 percent in 1958 over 1957, a very substantial increase.

Senator HILL. That is practically a fifth.

Miss SWITZER. Yes, and when you add this to the Federal dollars, it is really quite dramatic, I think, to see the way the total funds available for basic support have gone up: $56 million total Federal-State in 1957, almost $67 million in 1958, and $73,500,000 in 1959. It really makes one encouraged about what is possible.

PROGRAM SHIFTS

There have been some very interesting evidences of shifts in the program improvements in service, getting at people who are difficult to serve.

I will just give you a few illustrations. For example, we had almost 72,000 people rehabilitated in 1957. The total people served went up from 221,000 in 1956 to 238,000 in 1957, which was an increase of 8 percent.

What I think is even more significant is that there were 1 or 2 major increases in groups of people served which I think are encouraging. For example, in view of the age composition of our population and in view of the things we are learning about the old age and survivors insurance disability payment program, we naturally feel that emphasis on the disabled older worker is vital. Therefore it is encouraging to report that of the total of 72,000 people rehabilitated last year 21,000 were over the age of 45, which is a 20 percent increase over the previous year. I think that is encouraging.

Likewise there were 21,000 rehabilitants in the group of what we call severely disabled persons. That was 11 percent more than in 1956. Who are they? They are the people who have to be sent away to rehabilitation centers. There was a tremendous increase in that group. They are the victims of mental illness, cerebral palsy, amputees, people whom you naturally feel are really severely disabled.

I think that is the greatest measure of progress of any of the figures that we have.

We continue to stress the importance of this program as reducing total dependency and naturally of this 21,000 severely disabled people many of them would be on relief if we had not reached them.

Last year 14,000 people were taken off relief through our program, which is an increase over the year before.

We continue to stress that.

Senator HILL. That meant they returned to work?

Miss SWITZER. Yes. We do not count our rehabilitation until the people have been at work long enough to establish the fact that they really have been totally rehabilitated.

This is the significant thing about the 71,607 figure.

How have we been able to do it? We have repeatedly said that there were four blocks to progress: Money, knowledge, facilities, and people.

RESEARCH PROGRAM

Well, I reported on the improvement in the financial situation. We have a dynamic research program. During 1957 we made 82 research grants in all manner of areas. It is through the knowledge that we have acquired in these research activities that we have been able to concentrate on the services to the more severely disabled group.

I know that you are familiar with the great variety of work that is going on in these research projects. Heartening projects for the cerebral palsied and mentally retarded are among the areas of emphasis. Work with the epileptics has also been a very encouraging area.

There is one research project which is so dramatic that I think it is encouraging to see what we have been able to do to bring it about. We have a cooperative research project with a very brilliant neurosurgeon in New York University who started his work several years ago in trying to control the tremors of Parkinson's disease. He has several hundred cases of successful surgical treatment in this field and his skill has become known throughout the world.

Last year he entered a new field, the field of young people who are the victims of constant motion. This one case, which is very dramatic as these pictures reveal, was a young girl who had been unable to be still since she was born.

Senator HILL. The muscles were working all the time?

Miss SWITZER. This is the way she looks today.

Senator THYE. It is almost impossible.

Miss SWITZER. It is a miracle beyond belief.

Dr. Cooper is working with a number of these cases.

This is the answer until we find the cause of what to do about some of these very, very involved young people with such extreme disabilities.

A person like that, one would feel, was almost better not here.

Senator HILL. That is remarkable.

Miss SWITZER. I knew you would be interested in that. This is one of our very dramatic projects.

Senator THYE. You cannot appreciate or understand until you have gone through some of the State hospitals and witnessed an entire ward of just such unfortunate persons. Once you have seen it with your own eyes——

Miss SWITZER. You never get over it.

Senator THYE. That is correct.

Miss SWITZER. Most of these people are considered to be not only physically disabled but mentally retarded and they are not. This girl is doing very well and will probably need vocational training and have a job.

WORK IN CLINICS

Senator HILL. Last fall I had the privilege of visiting Howard Rusk's Clinic in New York.

Miss SWITZER. I saw Dr. Kottke in Omaha when I was there last week. He was telling me some of the things going on in the University of Minnesota Clinic which Dr. Diehl has been interested in developing. That center around the university is a tremendously encouraging thing, I think, to the whole State of Minnesota.

Senator THYE. It is to the Nation likewise as to development of the understanding that comes out of such research.

Miss SWITZER. Of course, I think the cooperation between the Mayo people in Rochester and the University is also a most encouraging accomplishment.

Senator THYE. The thought was to have cooperation between the Mayo Memorial and the Clinic of the Mayos with the Veterans' Administration and the university. We felt that if you got those things working together there would be advancement.

Miss SWITZER. Of course, the wonderful thing that the University of Minnesota does, and I see them trying for the same thing in Nebraska, is to serve the whole State, bringing people from all over the State and having training institutes for physicians, and others, in order to bring to them the most recent knowledge and practice available.

Of course, our training program is extremely important because without trained and dedicated people you can do very little.

This committee has always been extremely sensitive to this need. We have been continuing our emphasis on training physicians, counselers, physical and occupational therapists. You remember that last year we started a speech and hearing training program, and we have about 7 programs going and 22 people who are receiving stipends.

EFFECT OF HOUSE ACTION

The effect of the House action on our program is that the only change that the House made in our budget request was to increase the allotment base from $53 million to $56 million to encourage a more rapid expansion of the program.

The committee stated in the report that "this increase would enable those States who have continued to increase their own appropriations to receive the full amount of Federal funds to which they are entitled under the formula in the basic Vocational Rehabilitation Act." Just what effect this increase in the base will have on the funds eventually required for 1959 we cannot say absolutely because 21 of the States are still in their legislative process.

Although a number of States have passed their appropriations we do not know just what the final outcome will be.

We have a table here which I would like to offer for the record.

Senator HILL. We will be glad to have it appear in the record.

Miss SWITZER. This will show you the difference between what States will get with the $56 million allotment base and the $53 million allotment base; which States will gain.

It also shows those States whose legislative action is finished.

Senator HILL. We will put that in the record at this point.

(The table referred to follows:)

COMPARISON OF FISCAL YEAR 1959 ESTIMATED FEDERAL GRANTS BASED OF ALLOTMENT OF $53 MILLION AND ALLOTMENT OF $56 MILLION, SECTION 2 OF THE VOCATIONAL REHABILITATION ACT

The attached table shows that a $56 million allotment base in 1959 requires additional grants of $887,396. Twenty-four States gain. Examples of large gains are $101,902 in Georgia, $97,013 in New York, and $165,656 in Pennsylvania.

Thirty-three States have already appropriated for 1959. Thirteen of these States would earn additional grants. The gain in these States totals $422,358, almost half of the gain in all States of $887,396.

The gain occurs in the 24 States which can use more than 100 percent of an allotment based on $53 million. Nine of these States can use 100 percent of an allotment based on $56 million. In the other 30 States the grant is the same under either allotment base. Thus the gains are in those States which are most nearly meeting the goals of an expanded rehabilitation program.

The following tabulation summarizes the gain in grants when an allotment base of $56 million is used instead of an allotment base of $53 million.

	1959 grant based on $53,000,000	1959 grant based on $56,000,000	Difference
24 States get more in grants if the allotment base is $56,000,000 instead of $53,000,000	$23, 663, 328	$24, 554, 178	+$890, 850
30 States get the same grant whether an allotment base of $53,000,000 or $56,000,000 is used [1]	21, 850, 105	21, 846, 651	−3, 454
54 States	45, 513, 433	46, 400, 829	+887, 396

[1] Delaware and the District of Columbia are "floor" States and receive a slightly higher allotment on a $53,000,000 base than on a $56,000,000 base, since the percentage of redistribution under sec. 2 (a) (5) (B) of th Vocational Rehabilitation Act is less on a $56,000,000 allotment base than on a $53,000,000 allotment base.

OFFICE OF VOCATIONAL REHABILITATION

Comparison of fiscal year 1959 estimated Federal grants based on allotment of $53,000,000 and allotment of $56,000,000

State or Territory	Allotment of $53,000,000		Allotment of $56,000,000		Difference (col 4 minus col. 2)
	Federal allotment (1)	Estimated grant (2)	Federal allotment (3)	Estimated grant (4)	(5)
Total	$53,000,000	$45,513,433	$56,000,000	$46,400,829	+$887,396
Alabama [1]	1,733,893	1,384,620	1,848,664	1,384,620	----------
Arizona	368,856	368,856	393,272	393,272	+24,416
Arkansas [1]	1,104,510	1,104,510	1,177,621	1,177,621	+73,111
California	2,722,781	2,722,781	2,853,180	2,750,458	+27,677
Colorado	506,150	435,105	539,653	435,105	----------
Connecticut [1]	353,954	353,954	353,967	353,967	+13
Delaware [1]	180,226	180,226	178,740	[2] 178,740	−1,486
Florida [1]	1,593,015	1,593,015	1,669,308	1,669,308	+76,293
Georgia	2,127,749	2,127,749	2,229,651	2,229,651	+101,902
Idaho [1]	186,153	155,148	198,475	155,148	----------
Illinois [1]	1,941,355	1,848,197	2,034,330	1,848,197	----------
Indiana [1]	1,108,392	514,167	1,181,760	514,167	----------
Iowa [1]	844,645	694,210	900,555	694,210	----------
Kansas	676,870	550,811	721,674	550,811	----------
Kentucky	429,331	429,331	457,750	457,750	+28,419
Louisiana	1,471,613	1,471,613	1,569,023	1,522,113	+50,500
Maine [1]	280,563	280,563	299,134	299,134	+18,571
Maryland	781,033	472,677	818,437	472,677	----------
Massachusetts	772,409	772,409	823,537	792,877	+20,468
Michigan	1,814,209	1,473,652	1,901,094	1,473,652	----------
Minnesota [1]	965,191	965,191	1,029,080	982,758	+17,567
Mississippi	1,153,233	917,395	1,229,569	917,395	----------
Missouri [1]	1,355,579	965,515	1,445,309	965,515	----------
Montana [1]	220,223	190,032	230,772	190,032	----------
Nebraska [1]	578,528	329,178	616,822	329,178	----------
Nevada [1]	37,885	37,714	39,700	37,714	----------
New Hampshire [1]	156,813	113,154	167,193	113,154	----------
New Jersey	1,030,386	1,030,386	1,079,732	1,079,732	+49,346
New Mexico [1]	334,132	179,957	356,249	179,957	----------
New York	3,384,100	3,384,100	3,546,170	3,481,113	+97,013
North Carolina [1]	2,379,610	1,860,297	2,537,124	1,860,297	----------
North Dakota [1]	269,237	221,611	287,058	221,611	----------
Ohio [1]	1,451,538	791,730	1,547,620	791,730	----------
Oklahoma [1]	1,067,134	1,012,087	1,118,241	1,012,087	----------
Oregon [1]	583,890	583,890	611,853	586,651	+2,761
Pennsylvania [1]	3,458,950	3,458,950	3,624,606	3,624,606	+165,656
Rhode Island	248,248	248,248	260,138	260,138	+11,890
South Carolina	1,471,048	910,138	1,568,421	910,138	----------
South Dakota [1]	240,411	240,411	256,324	254,153	+13,742
Tennessee [1]	1,933,548	1,676,235	2,061,536	1,676,235	----------
Texas [1]	2,871,057	1,424,379	3,061,101	1,424,379	----------
Utah [1]	342,641	192,800	365,321	192,800	----------
Vermont [1]	176,554	176,554	185,010	185,010	+8,456
Virginia	1,471,837	1,165,223	1,569,263	1,165,223	----------
Washington [1]	741,848	741,848	777,377	777,377	+35,529
West Virginia	1,141,265	1,141,265	1,195,922	1,195,922	+54,657
Wisconsin [1]	1,352,575	1,310,656	1,417,351	1,310,656	----------
Wyoming [1]	108,879	108,879	114,093	114,093	+5,214
Alaska [1]	122,145	122,145	130,230	126,578	+4,433
District of Columbia	238,661	238,661	236,693	[2] 236,693	−1,968
Guam	45,973	45,973	48,177	48,177	+2,204
Hawaii [1]	190,707	190,707	199,839	191,719	+1,012
Puerto Rico	860,078	586,141	917,010	586,141	----------
Virgin Islands	18,389	18,389	19,271	18,389	----------

[1] Legislature has already appropriated for the 1959 fiscal year.
[2] Delaware and the District of Columbia are "floor" States and receive a slightly higher allotment on a $53,000,000 base than on a $56,000,000 base, since the percentage of redistribution under sec. 2 (a) (5) (B) of the Vocational Rehabilitation Act is less on a $56,000,000 allotment base than on a $53,000,000 allotment base.

WORK AT ANDERSON CLINIC

Miss SWITZER. I believe I have finished my summary.

Senator HILL. Let me ask you this. How much is contemplated in the budget estimate for the demonstration project under section 4 (b), the Anderson Clinic? Give us that story, would you, please?

Miss SWITZER. You will recall that the 1954 act authorized the Secretary to make a grant to assist with the financing of a national pilot center in the Washington area. The Anderson Hospital was so designated by our advisory council. It was thought at that time that we would promptly have a fully going rehabilitation center. I think we all felt that to have a comprehensive center in this area would be a valuable asset for many reasons. This is a place where people come and it would be a very helpful thing as this part of the country has no such comprehensive program.

Unfortunately, there were complications in the completion of the building so that the council never really saw the project totally; but from time to time, did award grants to develop the staff, the rehabilitation team, and at the last meeting to help equip the new center which is now fairly close to completion.

Senator HILL. Of course, you mean the physical facilities?

Miss SWITZER. Yes.

Finally Dr. Engh decided he could not wait for community volunteers to complete the building, and I think he was wise in that, so he made a contract and the building will be completed shortly after July 1.

I think the question we have to face is this: We have, with the legislative history of this project before us, recognized the intent of the Congress to do something special for this facility but we do have to consider its relationship to the total national program and we do have to consider our grant in relation to sound fiscal policy.

You know that I believe in helping, and being as flexible as possible in assisting promising developments which will expand and extend rehabilitation services. But I think one has to be scrupulous in being sure that our Federal dollars do not pay for those things for which other dollars are provided for.

DEPARTMENTAL SUPPORT

We have been supporting the rehabilitation team of the hospital at a level of $80,000 per year during the planning and developmental effort. We have granted about $90,000 for equipment that will go into the building. We understand that a request for the calendar year 1959 will be presented to us for about $650,000 which includes a substantial amount for room and board and special services for patients, in other words, the total cost of the patients' stay in the center. Although section 4 (b) of the act authorizes the payment of room and board, there are several questions on which your guidance would be helpful.

This will be about a 34-bed facility. They contemplate something over 700 in-patients in any 1 year, which is a large number. Many of these patients will be paid for by other agencies and there is the question: Would it be the desire of the Congress that the deficit between the cost of rehabilitating a Virginia patient, for example, and what the State or other sponsor pays be made up entirely by Federal funds? At Alexandria Hospital, in which I am also interested, the hospital can get only the State ceiling of about $17 for a rehabilitation case, and the city of Alexandria and the hospital have to absorb any additional costs.

Senator HILL. These two clinics are a few miles apart within the same State and area; are they not?

QUESTION OF FINANCING FACILITY

Miss SWITZER. Yes. I feel that if it is the desire of the Congress that this demonstration center be totally subsidized in terms of room and board and total operating expenses, on an advance basis, with receipts credited against costs on a revolving fund basis, this would be a very marked departure from the way we finance any other program or facility. If this is the committee's wish, it seems to me that it ought to be written into the appropriation act so that we would have a clear understanding of the intent of Congress.

We have estimated in our base for fiscal year 1959 support for this activity at the level of about $200,000.

Senator HILL. How much did they get this year?

Miss SWITZER. We have made payments to date this year of $50,000, but we expect that the total for the year will be about $175,000. Next year when they are in full operation, we thought possibly up to $200,000 would be sufficient, mainly for staff and equipment. We have just received a request for $262,000 for the first half of the next fiscal year.

It seems to me that the center's request for approximately $650,000 presents some very basic questions of financing. I think that if the committee wishes this project financed in some other manner than we are financing our other demonstration projects that it ought to be written in the act.

PRECEDENTS FOR FEDERAL AID

Seantor HILL. Are there ay precedents to finance it?

Miss SWITZER. There is precedent in the metropolitan area of Washington for giving special consideration to metropolitan area projects.

Congress has appropriated special funds for all of the District health facilities so that I do not object to such procedures if it is clearly understood what the limit of our responsibility is.

It would be a grave responsibility for our office to make an advance grant for patient care and services which is quite different from that which any other institution receives from us and without regard to the source of payment for the patient.

I think that it would be in order to consider making a small advance, something in the neighborhood of $20,000 or $25,000, for patients who have special disabilities for whom there is no one to pay. This, I think, might be considered.

Senator HILL. You do not think you would be setting a precedent there?

Miss SWITZER. Yes. But you have to take each proposal on its merits. This is something that almost every center needs. Most of them set up a small fund which they get from local community sources to support patients who cannot pay.

Senator HILL. If you did it for this clinic, what would be your answer to the other clinics?

Miss SWITZER. We would have less reason not to give it to them, obviously. I feel that we should consider this. I believe that Dr. Engh has asked for an opportunity to appear before you.

Senator HILL. He will appear.

Miss SWITZER. I think that it is quite important that the committee get the full story. If you feel that our philosophy and our method

of dealing with this project is sound that would be fine. If you feel that there is something else you would like us to do after hearing Dr. Engh and considering all aspects of it, we would welcome guidance and advice.

Senator HILL. I understand your situation fully because other members of Congress, representing some 435 districts, and 94 of the Senators would say and in fact Senators representing Virginia would say we have a fine center at Richmond and one at the University of Virginia at Charlottesville.

Miss SWITZER. And one at Fishersville.

Senator HILL. They would say, "Why do you pick out the one center and give them a different treatment?"

Miss SWITZER. If it goes through, Senator Thye will be getting letters from a couple of places in Minnesota anxious to get this money.

Senator HILL. I think I know a place on the Gulf of Mexico, too. It is a question of equal treatment.

Miss SWITZER. Yes, and of staying with more or less conventional financing. I think we want to use our funds as flexibly as we can but public moneys have certain conventionalities attached to their disbursement which I think should be observed.

Senator HILL. Is there anything else that you would like to add on the Anderson Clinic?

Miss SWITZER. No.

Senator HILL. When you go over your remarks you may add something, if you like.

Miss SWITZER. We will go over that carefully and insert anything helpful. In fact, we will put in a full statement of what has been granted to date.

(The statement referred to follows:)

Section 4 (b) of the Vocational Rehabilitation Act reads as follows:

"The Secretary shall be authorized to cooperate in assisting with the financing of a pilot demonstration rehabilitation center in the metropolitan Washington area to be used as a guide for rehabilitation centers which may be set up later in other parts of the country. Sums made available for such a pilot demonstration center in the Washington area may be used during such initial period as the Secretary may determine for such services as hospitalization, domiciliary care, and rehabilitation training, including costs of board and room of trainees and other services essential to the program, as in the discretion of the Secretary deems desirable. The services of such a pilot demonstration rehabilitation center in the metropolitan Washington area shall be made available to area civil-service employees as well as to other patients."

Upon the recommendation of the National Advisory Council on Vocational Rehabilitation which, under the law, considers and makes recommendations on all special project applications, the Office of Vocational Rehabilitation awarded grants totaling $145,637 for the fiscal years 1956 and 1957 to be used primarily to pay the salaries of a rehabilitation team currently providing physical rehabilitation services to patients in the Anderson Orthopedic Hospital. In addition, it was felt by the Council that the team should be responsible for planning for the development of services within the rehabilitation center.

For the current fiscal year, a grant of $177,915 was made of which $84,300 was for the continued support of the team including supporting services, and $93,600 for equipment to be installed in the new center which is now close to being finished.

Total funds granted to date for this project amount to $323,552.

PROSTHETIC PROGRAM

Senator HILL. You recall the special fund of $200,000 for the prosthetic program. How is that working?

Miss SWITZER. That is working beautifully. We have had as much success in developing our prosthetic programs as result of that fund, as of almost anything that has happened in the last several years.

We are now engaged in a joint activity with the Prosthetic Research Board to review the activity as to where we should direct our next research. Many things are happening in the arm brace field particularly.

Dr. Paul Mangnson is making a survey. We want to open a third center in the Middle West when we can afford it and continue to spread the results of this research and training to as many people as possible, particularly the physicians and counselors and therapists that are far away from these centers, and who really are the ones who have to decide whether or not what they are getting for their people is first class.

Senator HILL. You will recall that the Disabled American Veterans in conjunction with some other organization put on a demonstration before the Senate Labor and Public Welfare Committee last spring.

Miss SWITZER. Yes. Since then we have some very exciting things going on in the field of the arm.

The man who triggered the atomic fission work that they do before the bomb goes off had two daughters stricken with polio, one very severely. As a result of trying to help her he developed a nylon muscle which is one of the most exciting new developments in the field of prosthetics for arms which have very little residual muscle tone in them.

We are hoping to put money into research in cooperation with the National Foundation for Infantile Paralysis on that.

The Heidelberg arm is another, using the principle of pneumatic pressure which releases carbon dioxide gas and causes rather spectacular things to come about.

EXPENDITURES FOR RESEARCH IN REHABILITATION FIELD

Senator HILL. What have been the amounts expended yearly by OVR for research in the field of rehabilitation since 1954?

Miss SWITZER. The first grants were made in the spring of 1955, and the following are the amounts that have been granted each fiscal year for research and demonstration projects: 1955, $300,000; 1956, $1,200,000; 1957, $2,000,000; and 1958, $3,600,000.

Senator HILL. Do you consider this to be an efficient rate of growth for a program of this type?

Miss SWITZER. That is a hard question to answer. Considering the fact that the vocational rehabilitation program covers such a wide variety of disciplines and fields, and that there has been so little organized research effort in this field, the growth of our research program has certainly been modest.

We can supply a table which illustrates the growth of the program, showing the number of new projects approved each year.

(The information referred to follows:)

Fiscal year:	New projects approved
1955	18
1956	29
1957	48
1958 (estimate)	70

GROWTH IN NEW PROJECTS

Miss SWITZER. The annual growth in the number of new projects approved has been accompanied by a steady growth in the number of applications. In fiscal year 1958, we are reviewing about 150 new applications for grants, more than twice the 74 received in the previous year. And there is every reason to believe this will continue to increase in fiscal year 1959, because of the growth of interest in rehabilitation research on the part of the universities, medical schools and hospitals, and other recognized organizations.

Senator HILL. How much money is being requested in fiscal year 1959, and how many new projects can be initiated with this amount of money?

Miss SWITZER. A total of $3.6 million is included for research grants in the appropriation "Grants to States and other agencies." Since more than $3.1 million of this amount is needed to continue projects approved in prior years, this would allow less than $500,000 for new projects. The $500,000 would provide for about 17 new projects.

Based on the year-to-year increases in new applications for grants, we are expecting to receive at least 200 requests for new applications in fiscal year 1959. The 17 new projects which we could support within the $3.6 million in the budget would be less than one-tenth of these new requests.

ESTIMATE OF FUNDS NEEDED

Senator HILL. How much money can be used efficiently in fiscal year 1959 and how would you propose to use this money?

Miss SWITZER. We believe that $5.6 million would permit the initiation of a reasonable number of new projects to support areas of research that either have not yet been gone into or which are now being inadequately supported. An appropriation of $5.6 million for fiscal year 1959 would enable continuation of the on-going projects, and we could plan on initiating about 80 new projects as follows: $3.1 million to continue about 100 on-going projects; $1.5 million for 50 new research projects; and $1 million for 30 new demonstration projects.

The 80 new projects in fiscal year 1959, compares with the 70 started in fiscal year 1958 and is a slower rate of growth than in previous years—this, despite the fact that the rehabilitation problems urgently needing research are coming to the forefront with increasing rapidity. The problems associated with rehabilitating the rapidly increasing number of ex-mental-hospital patients are daily becoming more urgent. We are supporting some research in this area but much needs to be done in terms of developing and improving our rehabilitation methods. The whole field of improving techniques for the rehabilitation of those with speech and hearing problems in still untouched. The need for

rehabilitation research for those disabled by neurological or vascular disorders is becoming more important as the rehabilitation agencies are giving increasing attention to the cerebral palsied, those with muscular dystrophy, the hemiplegic and the paraplegic. We are doing some but not nearly enough research in these areas.

Dr. Rusk, in an important analysis of the problems related to the physical rehabilitation aspects of vocational rehabilitation, has emphasized the need for organized scientific effort to study the physiologic changes which a disabled person undergoes during and after rehabilitation, to study the techniques of prognosis which are now used, and which are still often empirical and subjective, and to study the factors which motivate the disabled individual to undergo rehabilitation. The committee would be interested in this paper on research needs, and with your permission, Mr. Chairman, I should like to present it for the record.

(The information referred to follows:)

Research Needs in the Physical Rehabilitation Aspects of Vocational Rehabilitation

(Prepared by the faculty and staff, department of physical medicine and rehabilitation, New York University-Bellevue Medical Center, at the request of the Office of Vocational Rehabilitation, Department of Health, Education, and Welfare, for the National Advisory Council on Vocational Rehabilitation)

INTRODUCTION

The prime objectives of physical rehabilitation are to (1) eliminate the physical disability, if possible, (2) minimize the physical disability if its elimination is not possible, and (3) minimize the effect of the disability upon the physical, social, emotional, and vocational capabilities of the individual after the physical disability itself has been reduced to the greatest possible degree.

As the use of physical agents in the diagnosis and treatment of disease has long been an established aspect of medicine, considerable research has been carried on over the years in the definitive aspects of physical medicine. As "rehabilitation" in which consideration is given to the total abilities and needs of the patient from the social, emotional, and vocational as well as aspects of physical medicine is a much newer medical concept, it is natural that far less research has been done in this area. Such research as has been conducted in physical medicine and rehabilitation has primarily been in terms of specific projects which have resulted from the interest of the investigator in some particular problem and the availability of equipment, clinical material, qualified staff, and funds to undertake such specific problems.

As yet there has been no concentrated effort by a group of experienced investigators and practitioners to develop an overall research perspective in physical medicine and rehabilitation in an attempt to identify those broad areas in which greater knowledge is needed in order that physical rehabilitation may make a greater and more effective contribution to the objectives of vocational rehabilitation. Such research perspectives exist in varying degrees in various other fields of medical research such as cardiovascular disease, cancer, poliomyelitis, and cerebral palsy as a result of longer, more sustained, and more intensive research interests and activities than have existed in physical rehabilitation. The ensearch perspectives in these fields, however, were not developed by any one single action, but have resulted from the development of methods whereby such matters are under constant study and assessment by the full-time research staffs of such organizations as the National Heart Institute and the other constituents of the National Institutes of Health, American Heart Association, and American Cancer Society and their scientific advisory committees. Nor is it possible in the physical rehabilitation aspects of vocational rehabilitation to establish such clearcut research perspectives as in those areas devoted to specific clinical entities, such as poliomyelitis, multiple sclerosis, muscular dystrophy, heart, and cancer for the primary research objectives are finding first the cause of a disease and then methods for its prevention.

It is the studied opinion of those who have prepared this paper that the fundamental research needs in which knoweldge is lacking which prevents physical rehabilitation from making a greater contribution to vocational rehabilitation fall into four general categories:

1. Basic physiological studies to learn the physiological changes which occur within individuals with certain disabilities when such individuals are subjected to treatment and retraining regimes utilized in physical rehabilitation.
2. Studies which attempt to develop new and improve currently used prognostic techniques.
3. Studies to better understand the dynamics of individual and group motivation as a factor in determining the failure or success of physical rehabilitation procedures.
4. Studies to make possible more quantitative evaluation of the functional capacities of disabled individuals and to provide improved methods of recording clinical information.

1. BASIC PHYSIOLOGICAL STUDIES TO LEARN THE PHYSIOLOGICAL CHANGES WHICH OCCUR WITHIN INDIVIDUALS WITH CERTAIN DISABILITIES IN TREATMENT AND RETRAINING REGIMES UTILIZED IN PHYSICAL REHABILITATION

In the past 10 years, the techniques utilized in the retraining of individuals with a variety of physical disabilities have been well delineated along apparently empiric lines. In this phase of development of rehabilitation medicine, emphasis has been almost exclusively upon the pragmatic, clinical approach, with relatively little attention to basic physiological mechanisms. Clinical techniques have been so standardized that, with adequate patient selection, one can predict the success and duration of a retraining program, e. g. level of lesion in the case of spinal cord disease. This approach has been necessary because of the great pressure for patient services and the paucity of trained rehabilitation professional personnel. Despite a few scattered studies directed toward assistance in defining underlying physiological mechanisms by a few interested investigators, there has been no organized scientific effort made to document the physiological changes before, during, and after rehabilitation procedures in patients with representative disease entities observed in a rehabilitation setting.

It seems pertinent that, with the standardization and universal application of the technical aspects of rehabilitation techniques, attention should now be focused on studies of the physiological responses of the patient to both treatment and the retraining regimes utilized in physical rehabilitation. In this context no discussion will be attempted of the work notably by the Mayo Clinic and Denver group, as well as others, on the effect of physical agents, such as various forms of heat (infrared, diathermy) ultrasound and massage, etc., on various tissues, bloodflow, and circulation. This, however, does not minimize the basic importance of such studies, since information has been obtained which has been of value in the general clinical usage of these agents.

In considering research perspectives in this frame of reference and consonant with the clinical concept of considering the "patient as a whole" it seems logical that this approach be maintained, since rehabilitation is usually directed to patients with systemic disease and not to an isolated disability. Information is lacking relating to the physiological effects of retraining procedures in patients with disease processes having rehabilitation significance, such as paralysis, hemiplegia, rheumatoid arthritis, muscular dystrophies, and congenital abnormalities.

As a long-range program of research, one may visualize the development for patients with disease processes involving physical disability an institute such as the now defunct Harvard Fatigue Laboratory and the Laboratory of Physiological Hygiene in Minnesota in this country and the Dortmund Laboratory in Germany. Numerous important studies have been accomplished by these and other institutions, which have led to a clearer understanding of work physiology. These studies, however, have been made in putatively normal individuals; a similar approach to the patient with systemic disease and disability is necessary and of fundamental significance to physical rehabilitation. A research institute may be envisaged as being part of a well-established clinical unit which has already proven itself in the clinical area. Such a research institute would not only consider problems in physiology but other basic sciences such as biochemistry, pharmacology, and biophysics. Provision would also be

made for studies in psychology, occupational therapy, physical therapy. An integral part of such an institute would be a metabolic unit designed especially for studies in the rehabilitation field.

Studies which have bearing on human energy expenditure would appear to be of especial significance since the most pressing research needs are in the physical rehabilitation aspects of vocational rehabilitation. Physiological study of normal man's capacity for physical work began on a systematic basis about 70 years ago. The classic work of Atwater with human calorimetry clearly established the validity of using rates of oxygen consumption as the basis for measuring energy expenditure (indirect calorimetry). Subsequently, rates of energy expenditure during a wide variety of human activities were recorded. In recent years, there has been a renewal of interest in such measurements, not only for normal individuals but for patients with heart disease (Bruce et al., Stewart, Benton, etc.) and arrested tuberculosis (Gordon). The recent renewal of interest has been due in part to the development of apparatus which could be used conveniently for study purposes under many industrial conditions. In addition, recent refinements in electronics have allowed for continuous monitoring by means of tele-and-radio-metering of such physiological variables as respiratory rate, blood pressure, and electro-cardiographic tracings, among others. The development by Brouha of the force plate also has given great impetus to energy expenditure studies in industry. Refinement of a light portable respirometer at the Max Planck Institute of Work Physiology (1952) which measures the volume of expired air directly and simultaneously diverted a small fraction (0.3–0.6 percent) in a collecting reservoir for subsequent analysis, greatly facilitated indirect calorimetry. This device, weighing less than 4 kilograms and worn on the back like a knapsack, has made investigations practicable under a great variety of conditions. Information is now available for energy expenditure at work in a variety of industries and in many working situations, including agriculture, as well as in activities of daily living, for normal people. In addition, using these methods, Christensen has been able to define in calories per minute the different grades of work:

	Calories per minute
Unduly heavy, energy expenditure over	12.5
Very heavy, energy expenditure over	10.0
Heavy, energy expenditure over	7.5
Moderate, energy expenditure over	5.0
Light, energy expenditure over	2.5

These figures correspond to rates of oxygen consumption of 2.5, 2.0, 1.5, 1.0, and 0.5 liters per minute, respectively. It is important to realize that these definitions apply only to rates of work which are carried on continuously for periods of a few minutes. Periods of heavy work must be punctuated by rest pauses. These will reduce the overall rates of work for a whole working shift and such definitions do not apply to average daily rates of work. Data is also available which indicates that the upper limit of working capacity in a well conditioned man is at overall rate of energy expenditures of not more than 5 calories per minute. This is considered an endurance limit and represents the upper limit of work that may be performed without an increasing accumulation of lactic acid and without a rise in body temperature. Such data gives an approximation of what may be expected in heavy industry. In light industry many other factors, such as the necessity to maintain awkward postures or the excessive use of one set of muscles, may limit capacity for work at much lower rates of energy expenditure.

Using these standardized methods, studies may be directed, using basal resting periods as well as normal individuals for controls, to derive similar information for patients with hemiplegia during the performance of upper extremity as well as lower extremity activities in standardized and controlled ADL, ambulation and elevation rehabilitation procedures. Since the majority of these patients have underlying cardiovascular diseases, valuable data relating to this disease process may also evolve. Another significant corollary of this type of study would be to determine the difference in the energy of ambulation with or without a short leg brace (a device used in many patients with this syndrome). Ancillary data relating to the cardiovascular and pulmonary systems may also be collected and collated. Such studies may be made serially before, during, and after a rehabilitation training program. Four important parameters of data can be thus made aavilable: (1) the actual energy cost of these stand-

ardized activities; (2) baseline energy expenditure studies in hemiplegic patients during retraining; (3) the physiological responses of such patients to retraining techniques; and (4) the effect of retraining on the physiological variables. There are now available sufficient micromethods in biochemistry which would enable one to determine subtle changes in enzyme and substrate values during these aforementioned training programs. Such studies should be invaluable from the viewpoint of etiology and therapeutic procedure. For those, where vocational rehabilitation seems feasible, similar data may be obtained in prevocational occupational therapy activities, as well as in actual selected working conditions. There is no available information of this type at present. However, studies in normal individuals, as well as cardiac patients, during the performance of standardized occupational therapy activities, have been reported (Kottke, Benton, Gordon, etc.).

Similar data are also needed for the paraplegic patient to enable us to understand on a scientific basis the effect of level of bracing, the type of crutch gait and the use of various types of hand-propelled wheelchairs. Information should be made available for other disability entities such as arthritides and dystrophies. Such essential data would enable the retraining programs to be placed on a more objective basis. More information is required concerning the pathogenesis of striated muscle spasm. Since spasm is a frequent deterrent to the prosecution of an effective rehabilitation program, a clearer understanding of mechanisms of its development would enable a more scientific therapeutic approach to its treatment. This has particular significance in patients with hemiplegia and paraplegia.

Since patients with cerebrovascular disease comprise an important treatment group in a rehabilitation setting, adequate understanding of cerebral hemodynamics is needed concerning patients with cerebrovascular disease. The effect of therapeutic procedures both medical and physical on cerebral metabolism require much study. In the past 10 years, with the advent of the Kety and Schmidt techniques for studying these important physiological entities in a hitherto almost inaccessible organ, a great deal of information has been recorded. Such techniques allow for fairly quantitative observation of specific factors such as cerebral blood flow and cerebral metabolism which have great bearing on rehabilitation management of the patient with hemiplegia resulting from a cerebrovascular episode. While there are numerous recent studies reporting the effect of aging and a variety of therapeutic agents on cerebral physiology, there is no specific supportive data. The best available data attempts to correlate such variables with prognosis and return of function. Should definitive data be developed, more objective methods of patient selection for therapeutic procedures may be forthcoming. In addition, serial studies may allow for definitive observations of the effect of retraining upon cerebral metabolism and cerebral blood flow.

Another area where further data are needed is in the vascular function in the stump of an amputated extremity. The effects of pressure on stumps is well known but there is a little objective evidence available which attempts to correlate the relationship of the type of socket with effective blood flow in the stump. This would have obvious practical significance in the field of prosthetic devices. As a corollary, an investigation into the phenomenon of causalgia as well as the ill-defined syndrome of "phantom limb" appears to be necessary, since these often interfere with retraining programs.

An investigation relating to the effect of rehabilitation procedures to calcium metabolism is necessary. It is well known that prolonged immobilizing disease predispose to the deposition of calcium salts in the urinary tract, as well as infection, hydroureter, and hydronephrosis, which ofttimes terminate in the death of the patient. While some studies on the effect of tilt table action on formed renal calculi have been reported, it appears desirable that a study involving renal function methods of prevention of such stones should be of great value, since there appears to be no known effective method other than surgical in the management of the larger varieties of stones.

No discussion concerning research needs in paralytic poliomyelitis will be made since this disease entity has been studied completely from a variety of disciplines including physiological as well as psychological by personnel in the various respiratory and rehabilitation centers in the past 5 years.

A fruitful line of investigation would be a full metabolic study of hemiplegia, paraplegia and quadraplegia. Such a study could envelop such areas as nitrogen balance, amino acid requirements, carbohydrate and fat utilization and vita-

min requirements. Included in such a study would be a particular investigation on the etiology and clinical aspects of decubiti. These studies require the existence of a metabolic ward complete with separate kitchen, laboratory (chemical and engineering) and collecting chambers. It should be stressed that the advances in rehabilitation will result from such well-controlled conditions.

No new research techniques and instrumentation are necessary since all of these suggested studies can be performed with existing types of physiological investigative tools. What is essential is a group of well-trained, interested professional personnel, along with the clinical population and place to carry these out.

It should be emphasized that the era of empiricism in rehabilitation is drawing to an end rapidly. The next era should be devoted to research in the basic disciplines of physiology, biochemistry, pharmacology, psychology, psychiatry and the other areas which are directly or indirectly involved in rehabilitation and chronic disease.

2. STUDIES WHICH ATTEMPT TO DEVELOP NEW AND IMPROVE CURRENTLY USED PROGNOSTIC TECHNIQUES

Prognostic evaluation is of the utmost importance in many aspects of medicine, but is of great significance in the physical medicine aspects of vocational rehabilitation. In some instances, such evaluation requires technical laboratory support, while in other instances concise clinical observations are of paramount importance; but in all situations, there is a basic need for quantitation of observations so that maximum objectivity may be attained. Viewed from a broad perspective, prognosis in physical medicine and rehabilitation seeks to define the present status of a disease process, to establish the outlook for maximal recovery and, finally, it attempts to correlate the clinical state of the individual with given levels of physical activity and work capacity that may be carried out successfully.

Clinical estimations

Attainment of these goals is particularly desirable, but difficult to establish in disease entities in which little significant information is obtanable by laboratory study. The patient with multiple sclerosis, the child with cerebral palsy, the traumatic paraplegic, all fit into a category where estimation of functional and vocational capacity depends to a great degree on the individual experiences and medical acumen of the examiners. In an attempt to introduce quantitative guides, and to arrive at a common basis for concise evaluation, the utilization of graded profile techniques appears to warrant further investigation. While this approach is not new, having been used in military medical installations and in studying multiple sclerosis patients, it has not been exploited to the fullest in rehabilitative endeavor from the vocational viewpoint. Briefly presented, this method employs the assignment of empirical values, weighed in accordance with importance to vocational activity as well as the completion of the daily individual necessities. The following, for example, would be considered and weighed accordingly:

1. Restriction of joint mobility:
   (*a*) Particular joint—shoulder, elbow, digital joints, etc.
   (*b*) Degree of restriction.
2. Level of motor function—correlating particular muscle group and limb involvement with Lovett system of muscle testing (values should be expressed as a percentage of full activity).
3. Status of coordination—upper or lower limb involvement:
   (*a*) Type of involvement—tremors, other dyskinesias.
   (*b*) Ataxia.
4. Ability—types of ambulation and transportation.
5. Activities of daily living with particular reference to fulfillment under conditions simulating vocational locale.

In such a manner, subject to statistical analysis and review, a norm could be set up, and basic quantitative levels established to reflect given physical and vocational capacities.

Electronic devices

Electronic devices have been widely applied during the past two decades in diagnosis and prognosis of disorders of the neuromuscular system. This is particularly true in investigations concerned with lesions of the peripheral

nervous system, where chronaxie determinations, strength-duration curves, direct stimulation of nerve and muscle, galvanic tetanus ratio and electromyography have been used to define the present status of the lesion and to predict the recovery of function. These studies have been helpful on a gross level, but there are still many questions which are deserving of more concise delineation. Without entering into specifics, some of these worthy projects include:

1. Correlation of the various methods employed in electrodiagnosis in an attempt ot clearly establish the indices of recovery of motor nerve function. Such a study would seek to more accurately establish the relationship between electrical signs of recovery and clinical recovery. The extent of required treatments, the use of definitive surgical measures as well as overall vocational planning would be enhanced by clarification of this issue.

2. There is a need for correlation of the qualitative and quantitative patterns determined by electromyographic study and the degree of muscle power. In essence, one aspect of this study would seek to establish a working relationship between what is determined by clinical muscle testing and what the electrical findings are. Such a study might entail detecting the electrical potentials of a single muscle with leads from multiple parts of that structure, integrating these voltages and then comparing them to the value established by the gross muscle test. In tendon transplant surgery, for example, accurate assessment of the power of the muscle to be used in the operation is important in determining firstly whether or not surgery should be carried out, and, secondly, in predicting the functional result to be expected. Present determination is based only on a relatively inaccurate clinical estimation and could be improved by introducing a well founded laboratory adjunct.

Vocational aspects

In consideration of the vocational potentials of the amputee due to arterial disease, prognostic evaluation entails accurate estimation of the vascular status of the remaining limb. Here again, prognosis could be enhanced by a multiphasic study plan including:

1. Controlled studies of capacity for physical activity. In the past, walking capacity has been tested by use of devices such as an ergometer and by studying walking over a prescribed distance at a set velocity. A simpler procedure would be the study of the fatiguability and onset of typical claudication pain in given muscle groups. In the usual patient intermittent claudication occurs in the gastrocnemius; in these a series of exercises involving the gastrocnemius would be employed. In patients where there is stenotic involvement of the region of the terminal aorta, exercises involving the gluteal and other thigh muscles could be studied. This stress phase would be augmented with information derived from the two studies which follow:

2. Thermometric studies of superficial and deep structures.

3. Oscillometric and plethysmographic studies.

These studies could best be done on a treadmill with controlled velocity and tilt angle. Under such conditions measured work and rate of work may be ascertained.

3. STUDIES TO UNDERSTAND BETTER THE DYNAMICS OF INDIVIDUAL AND GROUP MOTIVATION AS A FACTOR IN DETERMINING THE FAILURE OR SUCCESS OF PHYSICAL REHABILITATION PROCEDURES

Since the advent of modern psychology, the emotional impact of disability upon the individual has commanded the attention of both research and clinical psychologists and psychiatrists. Their theories have varied. Some have followed the widely accepted concept of Alfred Adler, that disability serves as a motivating factor through compensation. Others believe the more recent social-psychological views of Roger C. Barker and others, that the physically handicapped person, being a member of a minority group and subject to economic and social pressures, is likely to develop the same emotional outlook as other minority groups who are discriminated against because of age, sex, religion, or race.

Many studies could be done to understand better the dynamics of individual and group motivation as factors in determining failure or success of rehabilitation processes. The first group of such studies would include historical, and anthropological, legal, and sociological studies of attitudes toward physical and psychiatric disabilities as they appeared in previous societies as well as in a

variety of cultures at the present time. Such studies might result in increased understanding of attitudes encountered in our present-day rehabilitation work.

The second group of studies might be those centered around the physical disability. Special studies could be designed to determine whether specific disabilities impose special or unique problems on the motivation of the individual. Such investigations would include factors related to physical disability as duration of disability, age at which disability began, and severity of disability. In addition, it would be desirable to know whether the etiology is congenital or acquired, traumatic or a disease process. Most authorities tend to discount the effect on personal motivation of the above factors. There have been, however, a few definitive studies substantiating this viewpoint.

The third group of studies might be centered around the psychological factors. These would include the roles of a patient's past history and personality in determining personal motivation for physical and total rehabilitation. Studies might be undertaken to determine the interplay of motivation and specific personality factors such as intelligence, depression, denial, anxiety, and dependency on failure of the rehabilitation experience. It would be important to know which factors exert a positive effect, which exert a negative effect, and under what circumstances the same personality factors may aid or detract from the rehabilitation experience. Such studies could include these factors which lead the patients to structure their own goals in regard to rehabilitation. Special research is needed in the motivational problems of the brain-damaged individual.

The fourth group of studies which might be undertaken would be those dealing with socioeconomic factors. Such studies would include the attitude and structure of the family in relation to the disability and the disabled person; as a corollary, the effect of these factors on the individual's motivation and ultimate outcome of the rehabilitation process would be considered. Studies might be undertaken to consider the advantages and/or disadvantages on the rehabilitation milieu of various types of rehabilitation settings, e. g., rehabilitation centers, sheltered workshops, home bound, schools and classes for the handicapped, general hospitals, treatment by individual practitioners. The effect of organized rehabilitation experience on the personality of the individual would be an outcome of such a program.

There are a number of studies on vocational factors that might be undertaken. These would include studies on the meaning of work, the attitudes of employers, supervisory personnel and coworkers toward the disabled person, on aspirational levels as related to vocational planning, and on the value of prevocational evaluation and training. Also, worthy of study are the multiple community factors and the various community organizations established for specific disabilities. The advantages and/or disadvantages of these organizations in orienting public opinion toward the attitude and motivation of the disabled individual is important to know. It is imperative to determine the effect of isolation of the disabled individual in specific areas such as sheltered workshops, special classes and separate communities as opposed to greater integration of the disabled in the general population. Studies might be undertaken to relate the effects of social recreation organizations for the disabled and religious groups on the rehabilitation process. An evaluation should be made of cultural factors, such as attitudes toward the disabled expressed in mass mediums such as movies, radio and television. Included in this evaluation should be how the role of education and educators on all levels play on the adjustment of the disabled. There is a particularly pressing need for greater research on the effect on motivation of legislative problems of the disabled, such as, unemployment insurance, compensation, pensions, special consideration, social security and housing.

The final group of studies might include problems of the management of personal problems involved during a rehabilitation program. Criteria must be established for the treatment of psychological problems of patients, through individual and group psychotherapy. The role of each of the disciplines such as medicine, occupational therapy, physical therapy, nursing, social work, rehabilitation counseling, speech and hearing therapy in the rehabilitation of the disabled person. An extension of these studies to learn something of the effects of individual procedure used by these various disciplines upon the motivation of the patient is important.

A special study might be made of patients who have done well in rehabilitation and who do not present "unusual problems." Such a study could possibly uncover these factors in motivation and rehabilitation which favor the success of a rehabilitation program.

4. STUDIES TO MAKE POSSIBLE MORE QUANTITATIVE EVALUATION OF THE FUNCTIONAL CAPACITIES OF DISABLED INDIVIDUALS AND TO PROVIDE METHODS OF RECORDING CLINICAL INFORMATION

Physicians and other health workers, rehabilitation personnel, biostatisticians, workmen's compensation groups, insurance companies and others who work with the disabled have long recognized the need for an effective method of evaluating and classifying the physical, social, vocational, and emotional capacities of the disabled individual from a functional standpoint. The trend in medicine and rehabilitation has been away from the anatomical concepts to the more modern functional concepts. Yet, our techniques for evaluating and classifying the capacities of the disabled have remained basically unchanged in the last four decades. On one hand, such records consist of a simple listing of the medical diagnosis; on the other extreme is the use of "percentage of disability."

From time to time, various individuals and organizations have stressed the need for standardization of nomenclature of "disability" and methods of its classification. Stinson and others have called attention to the fact that medical diagnoses are inadequate in evaluating the classifying of the functional capacities of the disabled individual, particularly when multiple medical and paramedical personnel are engaged in the interpretation of diagnostic terms. The National Conference on the Care of the Long-Term Patient also called attention to this need.

The growth of the volume of rehabilitation services rendered by the Office of Vocational Rehabilitation, rendered through the State-Federal vocational rehabilitation programs and other organizations; the "disability freeze" old age and survivor's insurance; and the lowering of the age level for old age and survivor's insurance benefits for persons with total and permanent disability have increased the need for research toward the development of a uniform system of evaluating and classifying the physical, social, vocational, and emotional capacities of the disabled individual from a functional standpoint.

During the past decade a number of instruments to evaluate the physical, emotional, social, and vocational capacities of disabled individuals have been developed. Such instruments for appraising the emotional, social, and vocational capacities of disabled individuals are much more highly developed and refined than those instruments which have been developed for appraising the physical capacities. Among the latter, some, such as the manual muscle test although applied subjectively, have been in use a sufficient length of time to become highly standardized in application and interpretation. Experimentation in the use of the activities of daily living by a large number of organizations and individuals has resulted in a considerable degree of uniformity in the application and interpretation of this test.

The development of quantitative instruments for measuring the physical, emotional, social, and vocational capacities of disabled individuals functionally can come in the opinion of our group only from "trial and error." Our group believes that research to attempt to develop more effective quantitative instruments which could then be correlated into a standardized disability profile which would reflect functional capacities should not be confined to one institution or group. A research effort toward this objective should be encouraged by all interested groups under a central leadership. Such an organization would have sufficient clinical material and clinical experience to conduct the research in these areas.

In evaluating a disabled person we are no longer concerned with the cause of his disability (once the disease process is arrested), but with his ability to function. The problem is quite complex, and medical diagnosis, although it serves to orient one regarding the type of disability, gives no idea of functional capacity. How to test the residual functional ability and record the results simply, clearly, and in a valid standard manner is the crux of the problem.

The various functional tests; for example, manual muscle test, ADL test, psychological, social, and vocational tests are all outgrowths of rehabilitational medicine. These tests give us a good approximation of the functional capacity of the individual. They are not, however, standardized. They are unwieldy and, in many instances, are not entirely objective.

The work of Benton, Brown, and Rintzler in 1951 was an early attempt to evaluate objectively the results of a rehabilitation program. In this method of evaluation, a numerical score was given depending simply on muscle strength. Weighting of the score by small muscles (as in the hand) was avoided by using

areas of the same general muscle size. Range of motion and activities in daily living were observed in the same general terms.

McBride and Hildenbrand are advocates of the method of disability evaluation by estimating percentage of disability. Although McBride uses a formula to calculate the percent disability, the values used in the formula are based on estimates of percentage loss in a unit of functional deficiency and a unit of physical disorders.

The Canadian Army and the United States Army, too, have seen the need for developing disability profiles. In 1943, the Canadian Army published the second edition of Physical Standards and Instruction for the Medical Examination of Serving Soldiers and Recruits. This contains a disability evaluation system known as PULHEMS Profile, where P equals physique, U equals upper extremity, L equals lower extremity, H equals hearing and ears, E equals eyes and vision, M equals mental capacity, and S equals stability (emotional). Each of these is rated 1 through 5 where 1 is normal and 5 is totally unfit. The system is now being revised and tested and is known as PLUMSHEAF.

In the United States Army, the system is known as PULHES and the numerical ratings are 1 through 4. "S" takes the place of "A" and "S" in the Canadian system and stands for "psychiatric." Prognosis is also considered and R (remediable), T (temporary), or D (permanently disqualifying, for overseas service) may be added to the rating.

The question of function in the activities of daily living has been answered by the work of many people, such as M. E. Brown, and E. Buchwald Lawton and Hoberman, et al. Brown has compiled a list of 100 items of daily activities which are timed and scored. The score is the simple addition of activities performed. As others are learned, the score increases. At the Institute, a prevocational motor skill inventory for cerebral palsied children has been compiled in which the type of activity (e. g., sewing) is matched against related work (e. g., seamstress). There are 100 items with a 1-point score for each item. Lawton has compiled a test list of daily activities in all phases, including consideration of the home situation. The use of forms such as these is now widespread and practically standard.

Recent work on classification has been carried out at the Southwestern Poliomyelitis Respiratory Center, Houston, Tex., and also at the NYU-Bellevue Medical Center. These represent attempts to obtain objective evaluations of disability on a functional basis.

It is the intention of staff in a study currently under way at the Institute of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center, to establish a standard disability profile for the evaluation of functional capacity physically, socially, psychologically, and vocationally. When the profile has been established and tested on several thousand patients, attempts will be made to develop objective scores that will not be a simple substitution of a number for a phrase, but rather a score that will have meaning, simplicity, and clarity. Eventually it is hoped that the forms developed will be tested by agencies such as DVR, OASI, etc.

With a sufficient number of groups and institutions working on the problem, a standard system of classifying disability functionally is bound to result, and will undoubtedly be a great boon to all those who work with the disabled.

NEED FOR ADDITIONAL RESEARCH

Miss SWITZER. The need for additional research in the field of prosthetics and bracing is more compelling because of the recent advances in electronics. These advances increase the promise of the solution of problems on which little advance has been possible to date. The combination of engineering genius with medical skill is fast beginning to show results. We can look forward to spectacular developments in this area in the years ahead.

The $5.6 million in fiscal year 1959 would also enable us to make 30 new grants for selected demonstration projects.

Senator HILL. Would you describe to the committee selected demonstration projects?

Miss SWITZER. At the beginning of this year we started a program taking the favorable results obtained in earlier research projects and applying them in other communities.

This is the quickest and surest way that we know to put the improvements and the ideas worked out in our research projects to immediate use in rehabilitating the disabled.

For example, a research project at the Institute for the Crippled and Disabled in New York City worked out a system for effectively evaluating the work potential of the cerebral palsied. Through this method a significant increase was obtained in the number who ultimately were sent forward for employment. We thought the best way to immediately inform other rehabilitation agencies about this was to help interested organizations set up projects in different communities over the country to demonstrate what can be done. Thus far, such projects are being organized by cerebral palsy organizations in Oregon, Pennsylvania, and Missouri. Similar demonstrations to apply the findings of a highly successful research project for the mentally retarded are being conducted in a number of communities in Pennsylvania, Virginia, Tennessee, Alabama, Illinois, Ohio, Missouri, Louisiana, Texas, and California. We would like to see at least one project in these fields in each State.

A successful research project for homebound in rural areas was carried out in Vermont; now organizations in Arkansas and New Mexico are carrying out similar projects. Another successful research project developed methods for rehabilitating disabled persons who couldn't get a job because of emotional problems; organizations in Ohio, Indiana, Missouri, and New York, are now carrying on similar programs.

NEED TO EXTEND DEMONSTRATIONS

There is a need for extending these demonstrations to other areas as well as for initiating demonstrations of other successful research projects dealing with other disability groups such as the hemiplegic and the deaf-blind.

Senator HILL. Why is it considered necessary to initiate new projects in prosthetics and orthetics?

Miss SWITZER. This field is so basic to the rehabilitation field that it has always been a special interest to this office. As you know, we are working closely with the Prosthetics Research Board of the National Academy of Sciences-National Research Council and are daily made aware of the many and varied research needs which exist in the field. Scientific discoveries in other fields are being increasingly applied to the prosthetics field. The development and application of the use of external power to operate prosthetic and orthetic devices such as the Heidelburg Arm and the Artificial Muscle recently developed at one of the respirator centers for polio patients hold potentials for startling forward progress in this field. But it should be emphasized that these are still in the early developmental stages. Much more research will be needed if they are to go beyond the laboratory.

Another area in which progress in engineering and other fields makes increased prosthetic research urgent relates to the study of the functional components used in prosthetic devices—the further develop-

ment of mechanical elbows, control mechanisms for the prosthetic device, and so forth. Increasingly such universities as New York University, University of California, University of Michigan, and Northwestern University are interesting themselves in research in the field of prosthetics.

NEED FOR RESEARCH

Senator HILL. Are there areas in the field of rehabilitation in which there is need for research that is not already underway?

Miss SWITZER. To sum up then—in addition to what I have touched on—there are a number of areas in which additional research is needed. These include further research into the adjustment of the mentally ill and the mentally retarded; a start in the speech and hearing field; more intensive work in problems of blindness and adjustment to it; surgical research into conditions like Parkinsonism and cerebral palsy to relieve tremors which cause constant motion; similar research to correct facial disfigurement; and further work in the field of epilepsy.

LETTER FROM SENATOR NEUBERGER

Senator HILL. I have a letter from Senator Neuberger, of Oregon, enclosing a statement from Mr. C. F. Feike, State director of the division of vocational rehabilitation of the Oregon Department of Education, urging the retention of the allotment base of $56 million as approved by the House for grants for basic support under section 2 of the Vocational Rehabilitation Act. I shall place these letters in the hearings.

(The letters referred to follow:)

UNITED STATES SENATE,
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
April 22, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Labor, Health, Education and Welfare, United States Senate, Washington, D. C.

DEAR LISTER: I am submitting for the record of your hearing on H. R. 11645, the appropriations bill for the Department of Health, Education, and Welfare, a statement from Mr. C. F. Feike, State director of the division of vocational rehabilitation of the Oregon Department of Education. Mr. Feike points out the importance of maintaining the allotment base for the States, as allowed by the House, in the amount of $56 million. This will enable the moneys appropriated by the State of Oregon to be matched according to the formula for State-Federal participation.

For many years I have followed with intense interest the efforts and accomplishments of the vocational rehabilitation people in Oregon. Here, Mr. Chairman, is humanitarian effort that actually pays dividends in the form of increased tax returns as handicapped individuals are assisted in becoming productive, taxpaying citizens.

Please consider this as my sincere statement in full support of the position taken by Oregon's director of the division of vocational rehabilitation.

Kind regards.

Sincerely,

RICHARD L. NEUBERGER,
United States Senator.

STATE OF OREGON,
DEPARTMENT OF EDUCATION,
DIVISION OF VOCATIONAL REHABILITATION,
Salem, April 16, 1958.

Senator RICHARD NEUBERGER,
United States Senate,
Washington, D. C.

DEAR SENATOR NEUBERGER: We have been informed that the Labor-HEW subcommittee of the Senate Appropriations is now holding hearings on the HEW bill.

We are writing to ask your interest and support in the budget, for the Office of Vocational Rehabilitation. It is of most importance to us that the allotment base for the States be maintained, as allowed by the House, in the amount of $56 million in order that the moneys appropriated by our State may be matched according to the formula for State-Federal participation.

This agency's responsibility for serving the handicapped in our State is tremendously important to our economy and any decrease in the support of the program will be serious for us.

We will be appreciative of your interest and support in our behalf.

Sincerely,

C. F. FEIKE, *State Director.*

LETTER FROM CINCINNATI SPEECH AND HEARING CENTER

Senator HILL. I have a letter from the Cincinnati Speech and Hearing Center urging additional funds for grants to States for vocational rehabilitation for research and demonstration as provided in section 3 of the authorizing statute. The letter will be included in the hearings.

(The letter referred to follows:)

THE CINCINNATI SPEECH AND HEARING CENTER,
Cincinnati, Ohio, April 14, 1958.

Hon. LISTER D. HILL,
Chairman, Labor-HEW Subcommittee of the Senate Appropriations Committee, Washington, D. C.

DEAR SENATOR HILL: We are writing to ask your support of Federal appropriations for research and demonstration programs administered by the Federal Office of Vocational Rehabilitation for 1959. It is our understanding that the President has requested $3,600,000 for these research and demonstration programs for next year. This was the same amount requested for 1958.

It has been estimated that our Nation's toll from accidents alone in the home and factory, on the highway, and on the farm, is a loss of $5 billion a year and the waste amounts 350 million man-days of labor. Each year there are 800,000 persons seriously injured—100,000 so severely disabled as to require special services to enable them to hold jobs again. Approximately another 100,000 are disabled annually by illness or from other causes. Thus, in contrast with the total number of combat-incurred disabilities in our Armed Forces for the year between Pearl Harbor and V-J day—approximately 260,000—the civilian figure appears truly large.

The most conservative estimate indicates that presently more than seven in every thousand of our population could benefit right now from vocational rehabilitation services. It is our feeling that even more money than the administration recommends, perhaps up to $5 million as a minimum, be provided to carry on the demonstration and research programs of the Office of Vocational Rehabilitation.

This is a fairly new program begun in 1954 which has not reached maturity yet. We know from our correspondence with others in the field of rehabilitation that there is a backlog built up of approved projects and a large number of applications for research and demonstration projects now on file. There will be no additional demonstration projects and very few additional research projects if money made available for 1959 only equals that of 1958.

There is a need for continuing expansion of these programs to show how to make use of the knowledge which has been gained in research in rehabilitation in the various areas of disability. We urge that the program be built up and further strengthened until it reaches an annual level of between $7 million and $10

million. This seems little enough to assure maintenance of an adequate program of research and demonstration in the field of general rehabilitation. Rehabilitation involves a comprehensive approach from the fields of health, welfare, education, employment, and recreation. To the taxpayer it is more costly in the long run to put the disabled on the "dole" than to rehabilitate and change them from economic liabilities to economic assets.

We hope you will wholeheartedly support increased appropriations for 1959 for research and demonstration programs administered by the Office of Vocational Rehabilitation.

Sincerely yours,

WARREN E. JOHNSON, *Director.*

Senator HILL. Have you any questions?

Senator THYE. I have no questions.

Senator HILL. Do you have anything else?

Miss SWITZER. Just that I want you to remember how important this program is.

Senator HILL. We have not forgotten in the past.

Senator THYE. You could continue all day.

Senator HILL. Thank you.

The subcommittee will stand in recess until tomorrow morning at 10 o'clock.

(Whereupon, at 11:55 a. m., Monday, April 14, 1958, the hearing was recessed until 10 a. m., Tuesday, April 15, 1958.)

LABOR—HEALTH, EDUCATION, AND WELFARE APPROPRIATIONS, 1959

TUESDAY, APRIL 15, 1958

UNITED STATES SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D. C.

The subcommittee met at 10 a. m., pursuant to recess, in room F–82, the Capitol, Senator Lister Hill (chairman of the subcommittee) presiding.

Present: Senators Hill, Hayden, Thye, and Ives.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

PUBLIC HEALTH SERVICE

STATEMENT OF DR. LEROY E. BURNEY, SURGEON GENERAL, ACCOMPANIED BY DR. JOHN D. PORTERFIELD, DEPUTY SURGEON GENERAL; DR. DAVID E. PRICE, CHIEF, BUREAU OF STATE SERVICES; DR. JAMES V. LOWRY, ACTING CHIEF, BUREAU OF MEDICAL SERVICES; DR. JAMES A. SHANNON, DIRECTOR, NATIONAL INSTITUTES OF HEALTH; ROY L. HARLOW, CHIEF FINANCE OFFICER; AND JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

GENERAL STATEMENT

Senator HILL. The committee will kindly come to order.

We have with us Dr. Burney, Surgeon General of the United States Public Health Service.

Doctor, we welcome you here. We will be delighted to have you make any statement you see fit, sir.

DEATHS FROM PRINCIPAL CAUSES

I shall place in the record the table titled "Deaths From Principal Causes," which is supplied the committee each year by the Public Health Service.

(The table referred to follows:)

Deaths from principal causes, United States, 1951–57 (includes only deaths occurring within the continental United States; excludes fatal deaths)

Cause of death	January–December 1957 (estimated)[1]	1956 (final)	1955 (final)	1954 (final)	1953 (final)	1952 (final)	1951 (final)
All causes	1,637,140	1,564,476	1,528,717	1,481,091	1,517,541	1,496,838	1,482,099
Tuberculosis, all forms	13,260	14,061	14,940	16,392	19,544	24,621	30,863
Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues	256,190	247,357	240,681	234,669	229,079	223,277	215,525
Diabetes mellitus	27,930	26,184	25,488	25,151	25,796	25,474	25,047
Diseases of cardiovascular system	875,370	838,848	815,532	781,018	795,888	776,114	764,281
Vascular lesions affecting central nervous system	188,010	177,845	174,142	167,777	169,800	166,331	163,550
Diseases of heart	626,560	602,995	584,620	560,077	570,275	555,141	545,675
General arteriosclerosis	33,950	32,018	32,486	30,225	32,351	31,685	31,884
All other cardiovascular diseases	26,850	25,990	24,284	22,939	23,462	22,957	23,172
Chronic and unspecified nephritis and other renal sclerosis	15,210	15,304	15,821	17,073	18,774	20,757	22,518
Influenza and pneumonia, except pneumonia of newborn	61,090	47,103	44,510	40,991	52,238	46,265	48,169
Cirrhosis of liver	18,810	17,924	16,763	16,201	16,399	15,934	15,075
Congenital malformations	21,410	21,065	20,502	20,081	20,012	19,768	18,865
Certain diseases of early infancy	65,130	64,546	64,043	63,486	63,444	63,659	63,096
Accidents	95,550	94,780	93,443	90,032	95,032	96,172	95,871
Motor-vehicle accidents	38,270	39,628	38,426	35,586	37,955	37,794	36,996
All other accidents	57,280	55,152	55,017	54,446	57,077	58,378	58,875
Suicide	15,980	16,727	16,760	16,356	15,947	15,567	15,909
All other causes	171,210	160,577	160,234	159,641	165,388	169,230	166,880

[1] Data for January–December 1957 based on a 10-percent sample of death certificates.

STATEMENT OF DR. BURNEY

Dr. BURNEY. Thank you, sir. Mr. Chairman and members of the committee, I appreciate the opportunity of appearing before you on behalf of the appropriations requests for the Public Health Service for fiscal year 1959.

I know you share with all of us in the Service the deep sorrow and sense of loss in the death of Dr. John W. Cronin, Chief of the Bureau of Medical Services. A loyal career Service officer and a dedicated public servant, he appeared before this committee many times on matters relating to the Hill-Burton hospital and medical facilities construction program. In his 25 years as a Service officer, he made many friends and contributed greatly to every program to which he was assigned, culminating in his appointment as Chief of the Bureau. You are as aware as I of the dynamic leadership, the wisdom, courage, and dedication he displayed as director of the hospital and medical facilities construction program. I speak for the entire Public Health Service in expressing our deep thanks to you, Senator Hill, for your thoughtful and sincere words of tribute to Dr. Cronin in the Senate.

Senator HILL. Doctor, may I say that the words I spoke about Dr. Cronin came out of my heart. He was a wonderful man, a dedicated public servant. This committee and the Senate had no better or more helpful friend. Time and again, as you say, he appeared before this committee, and he always came in a most constructive way, to be helpful, to assist us to try to do a better job. He was a wonderful man, a wonderful public servant and I appreciate the fact that you should open your remarks this morning with this very beautiful tribute to him. I want to join you in that tribute, sir.

INTRODUCTION OF DR. LOWRY

Dr. BURNEY. Thank you, sir, for all of us in the Service.

I want to present to you Dr. James V. Lowry, Dr. Cronin's Deputy and now Acting Chief of the Bureau. Dr. Lowry is also a longtime career officer with 20 years of service. His most recent assignment was as medical officer in charge of the Public Health Service hospital at Lexington, Ky.

Senator HILL. We are glad to have you here, Doctor.

Dr. LOWRY. Thank you.

Dr. BURNEY. Preceding that, he served at the National Institute of Mental Health as Chief of the Community Service Branch.

In addition to Dr. James A. Shannon, Director of the National Institutes of Health, and Mr. Roy Harlow, our Chief Finance Officer, whom you know, I want to present two other senior officers who have assumed key administrative positions since I last appeared before this committee.

Dr. John D. Porterfield is the Deputy Surgeon General.

Senator HILL. We are glad to have you here, Doctor.

Dr. BURNEY. Dr. David E. Price, the new Chief of the Bureau of State Service, was Chief of the Research Grants Division at NIH and Assistant Surgeon General in the Office of the Surgeon General under my predecessor, Dr. Leonard A. Scheele.

Our basic responsibility, as the principal Federal health agency, is to protect and promote the health of the people of the United States.

We discharge this responsibility by providing nationwide leadership in health, and through direct operations, technical assistance, and grants in research, training, health facilities, and disease control. Over the years, the interest of this committee and of Congress as a whole has enabled us to carry out these responsibilities and to meet new and emerging health problems.

In preparing our budget for fiscal year 1959 we have given considerable thought to where we now stand in health and to the relationship of the Nation's health status to our national strength.

Our Nation's response to the enormous challenges of today's world depends very largely, I believe, on the strength and vitality of our people. No matter how advanced we become technologically, our real defense is in the people. We must, therefore, continue our efforts to maintain and extend high levels of health in this country.

The budget which is before you would support vital programs of research, training, medical care, and public health services, I would like to present briefly a few highlights of progress in these areas, some of the new problems and our approach to them, and finally a budget summary of our request for fiscal year 1959.

Research

Research is an important element in all Public Health Service programs, including those whose primary missions are environmental and community services, and medical care. Research is conducted in our own laboratories at the National Institutes of Health, the Communicable Disease Center, the Sanitary Engineering Center, and at other installations. Through grants, we extend this effort to the Nation's medical schools, universities, hospitals, and other research facilities. In this way, the talents of thousands of scientists and the resources of hundreds of institutions are brought to bear on the problems of health and disease.

It would be impossible for me to summarize even a portion of the combined Public Health Service and grant-supported research. Each year, however, significant progress is reported—in specific new techniques as well as in promising leads.

Within the past year, for example, new inroads were made in such fields as cancer, arthritis, high blood pressure, diagnostic and prophylactic methods for communicable diseases, virus studies, and water pollution control. The witnesses for the various appropriations will describe these for you in detail, but I should like to mention some highlights in passing.

For many years, scientists have been investigating the role of viruses in the causation of cancer. Several significant developments have now occurred in this area. Scientists from the National Institutes of Health have obtained a viruslike substance from cell suspensions of an experimentally produced cancer grown in tissue cultures. When injected into healthy animals, such as mice and hamsters, this substance produced malignant tumors on the skin, in the kidneys, the breast and other sites, Of course, we do not yet know how significant these animal experiments will be in relation to human cancer. But if further investigations establish that the substance is indeed a virus and that certain forms of cancer are viral in origin, we will have made a very important advance against this dread disease. A vaccine may then

be theoretically possible that may be able to prevent certain cancers in human beings.

There was also further progress in the chemical treatment of cancer with drugs. Chemical treatment of a rare but highly fatal cancer that develops during pregnancy—called choriocarcinoma—continued to prove successful, and won for its developer, Dr. Roy Hertz of the National Cancer Institute, the A. A. A. S. Anne Frankel Rosenthal award for cancer research.

Last year, a promising new drug, chlorothiazide, was used for the first time in the treatment of high blood pressure. Effective when used by itself, the drug also increases the effectiveness of other antihypertensives when combined with them.

A simple, swift test for diagnosing rheumatoid arthritis was developed during the year. Earlier tests required special laboratory facilities and sometimes took several days to complete. The new test can be performed in 20 minutes in the physician's office or laboratory.

These are but a few of the exciting developments under way in basic and clinical research. Even more are on the horizon, although practical results may not be apparent for some time.

APPLIED AND DEVELOPMENT RESEARCH

Equally important advances are being registered in the field of applied and developmental research. Research in the control of communicable diseases at our Communicable Disease Center has resulted in the development of new laboratory reagents for the rapid and accurate diagnosis of infectious organisms. Through a new fluorescent antibody technique, for example, organisms which took up to a month to identify by traditional methods can now be identified within a few hours. This procedure still needs further refining, but it promises to be of great practical public health importance.

Studies in control methods and epidemiologic techniques for such diseases as encephalitis, rabies, and infectious hepatitis are going forward at the Center's Virus Research Laboratory in Montgomery, Ala. Of particular significance this year has been the work on influenza viruses, including the Asian strain. For this work, Mr. Chairman, Dr. Keith Jensen, Chief of the Laboratory's respiratory disease unit, was named by the junior chamber of commerce as 1 of the 10 outstanding young men of America for 1957.

For several years, too, CDC has been investigating staphylococcus infections. There is increasing concern among both hospital and public health officials about the problem of staphylococcus infections in hospitals, particularly the strains that are resistant to antibiotics. The recent influenza epidemic highlighted this problem as a complicating factor. We are carefully coordinating NIH and CDC studies in this area.

In addition, I have asked the American Hospital Association's committee on infections within hospitals to meet with us next week to review the current situation and to explore future needs in research, laboratory support, control measures, and hospital responsibilities.

Research in health problems of the environment is one of the principal responsibilities of the Sanitary Engineering Center in Cincinnati, where new knowledge is being gathered on milk and food sanitation, radiological health, and air and water pollution. Just a

few weeks ago SEC scientists reported a promising lead in water pollution control research. Sulfite wastes resulting from the manufacture of paper and paper products have caused serious stream pollution problems for many years. Our investigators have, however, discovered a fungus which not only reduces this troublesome waste but also turns it into an extremely useful byproduct—fumaric acid, which is widely used in the manufacture of paints, plastics, and various synthetic products.

AMOUNT OF SUPPORT EFFECTIVELY USABLE

Other examples of progress will be mentioned as these hearings progress. I would like to turn now, however, to your letter of last month, Mr. Chairman, in which you asked me to find out from research institutions now receiving Public Health Sservice grants and awards how much support they believe they can effectively use during each of the next 3 years for research projects, training, and facilities.

The data have been supplied by the medical and dental schools and other research institutions in response to a questionnaire sent out by the National Institutes of Health. Summary tables have been submitted to you in connection with these hearings.

The responses received by the institutions queried indicate that more funds could be used than are provided for in the budget request for 1959. We believe, however, that this request was the best balance which could be struck between unlimited support and a thoughtful consideration of the entire Federal fiscal picture.

REQUEST FOR SURVEY

Senator HILL. At this point I shall place in the record the text of my letter requesting that the survey be made, the letter to the prospective applicants from NIH with enclosures, and the summary table of needs.

(The material referred to follows:)

UNITED STATES SENATE,
Washington, D. C., March 4, 1958.

Dr. LEROY E. BURNEY,
Surgeon General, Public Health Service,
Department of Health, Education, and Welfare,
Washington, D. C.

MY DEAR DR. BURNEY: For the past several years the increased appropriations which the Congress has made annually to support expanded PHS medical, dental, and related programs of research grants, research training, and construction of research facilities give evidence of the very deep and continuing conviction of the Congress that these programs merit complete support. In this connection, you will recall that the congressional appropriations for fiscal years 1957 and 1958 exceeded the formal budget requests by approximately $56 million and $21 million, respectively. The Congress has been assured that these added funds have been employed (except for approximately $10 million unexpended in fiscal year 1957) to support meritorious activities in these fields; therefore, the question again arises as to the real needs in these areas.

Since it is obvious that the budget requests you are permitted to make do not suffice for these pressing needs, I hope you are willing that the NIH staff take such immediate steps as are necessary to query the universities, schools, colleges, and other research institutions concerned in order that this committee can be promptly advised as to their total minimal financial requirements for the forthcoming 3 years to carry these programs forward at an optimal rate. Such advice from the institutions will provide the Congress with reliable and

current data which are not now at hand. It is not expected, of course, that these needs be set forth in detail; rather, that the figures supplied reflect the judgment of each institution as to its minimal needs for each of the next 3 years beginning July 1, 1958, in support of (1) research work, (2) research training, and (3) research facility construction on the basis of a maximum Federal participation of 50 percent. This inquiry does not include the needs for teaching facilities of the institutions concerned.

This proposal has been thoroughly discussed with Representative John E. Fogarty, who joins me wholeheartedly in this request.

It is of importance that we receive this data as quickly as possible. Representative Fogarty and I feel that the essential information we need can be elicited from a brief individual communication which can be sent out immediately to all research installations. The Senate Appropriations Committee will hear testimony on the fiscal 1959 budget of the United States Public Health Service either the second or third week in April, and we would like the data for use at that time.

Very sincerely,

(Signed) LISTER HILL.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
PUBLIC HEALTH SERVICE,
NATIONAL INSTITUTES OF HEALTH,
Bethesda, Md., March 14, 1958.

DEAR DR. ———: I am enclosing a copy of a self-explanatory letter which Dr. James A. Shannon, Director, National Institutes of Health, is sending to the deans of all medical, public health, and dental schools throughout the country.

Since you are the person at your institution who is usually named as payee on grants approved by the Public Health Service, will you please discuss this matter immediately with all appropriate officials of your institution (and affiliated hospitals) in order that we may have advice in time (March 31, 1958) to prepare a table of total needs prior to the hearings. It is particularly important that there be no duplication of stated needs. Also, it should be noted that the inquiry does not include needs for teaching facilities.

If there is need for clarification, letters may be addressed directly to me, or if you wish to telephone, my number is OLiver 6–4000, Extension 2517.

Sincerely yours,

ERNEST M. ALLEN, SC. D.,
Chief, Division of Research Grants.

Enclosures: Questionnaire; Letter from Director, NIH, to deans of medical schools, dental schools, and schools of public health.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
PUBLIC HEALTH SERVICE,
NATIONAL INSTITUTES OF HEALTH,
Bethesda, Md., March 14, 1958.

DEAR DR. ———: In order to respond to a request from the chairman of the Senate Appropriations Subcommittee to the Surgeon General, the Public Health Service asks your advice as to the needs of your institution for the next 3 years for (*a*) research grants, (*b*) research training, and (*c*) research facilities construction support from the National Institutes of Health programs. Senator Hill's letter to the Surgeon General reads, in part, as follows:

"* * * take such immediate steps as are necessary to query the universities, schools, colleges, and other research institutions concerned in order that this committee [Senate Appropriations Committee] can be promptly advised as to their total minimal financial requirements for the forthcoming 3 years to carry those programs forward at an optimal rate. Such advice from the institutions will provide the Congress with reliable and current data which are not now at hand. It is not expected, of course, that these needs be set forth in detail; rather, that the figures supplied reflect the judgment of each institution as to its minimal needs for each of the next 3 years beginning July 1, 1958, in support of (1) research work, (2) research training, and (3) research facility construction on the basis of a maximum Federal participation of 50 percent. This in-

quiry does not include the needs for teaching facilities of the institutions concerned * * * "

Senator Hill's letter further states that, "The Senate Appropriations Committee will hear testimony on the fiscal 1959 budget of the United States Public Health Service either the second or third week in April, and we would like the data for use at that time." Therefore, we will need these data by March 31 in order to collate the material and furnish a report to the Senate committee.

For purpose of this inquiry, please show only direct costs of research projects. Indirect costs will be computed here on an overall national basis. For research projects and research training grants (including teaching grants) include anticipated continuation of current support as well as additional funds needed for expansion for each of the 3 years. For health research facilities show only the proposed Federal participation, which cannot exceed 50 percent of the total cost exclusive of site costs and of off-site improvements. Also, please indicate your assurance of availability of matching funds, noting anticipated sources.

The data submitted on the enclosed questionnaire should reflect realistic estimates taking in account the following considerations: (1) It is understood that the same high standards of research and training which have been the foundation of the National Institutes of Health program will be maintained in the future. The estimates in response to this letter should be based on an assumption of a continuation of the previous high standards of submitted projects; (2) consideration should, of course, be given to your own program planning in these research and research-related areas which gives adequate recognition to the necessity for maintaining a sound balance between research and the other functions of your institution; (3) careful consideration should be given to the availability or lack of availability of personnel of high quality, and of adequate physical facilities; and (4) the estimate of the minimum need for Federal funds for research and research training purposes will be based upon a continuation of at least the current level of institutional support for these functions; i. e., that there will be no reduction in institutional support by a shift to Federal financing.

Please forward your replies (or requests for clarification of this letter) by March 31 to Dr. Ernest M. Allen, Chief, Division of Research Grants, National Institutes of Health, Bethesda, Md. (Telephone: Oliver 6-4000, extension 2517.)

Your assistance in this matter is very much appreciated.

Sincerely yours,

JAMES A. SHANNON, M. D., *Director.*

Enclosures: Questionnaire; copy of letter to your business office.

Minimal requirements for financial grants from the Public Health Service [1]

	Fiscal year 1959	Fiscal year 1960	Fiscal year 1961
Research projects:			
Direct cost	$149, 128, 735	$167, 865, 103	$185, 401, 786
Add 15 percent indirect cost	22, 369, 210	25, 179, 765	27, 810, 267
Total for research projects	171, 497, 945	193, 044, 868	213, 212, 053
or			
Add 25 percent indirect cost	37, 282, 183	41, 966, 257	46, 350, 446
Total for research projects	186, 410, 918	209, 831, 360	231, 752, 232
Research training	45, 726, 574	51, 148, 371	59, 613, 768
Teaching grants [2] (nonadd)	(18, 405, 718)	(20, 682, 056)	(22, 286, 951)
Health research facilities [3]	107, 074, 311	105, 600, 220	66, 099, 390

[1] Results of March 1958 survey, conducted by the NIH at the request of Senator Lister Hill, chairman of the Senate Appropriations Subcommittee. Table includes data from all schools of medicine, dentistry, public health, and other institutions receiving current support.

[2] Teaching grants are included under "Research training"; they are separated as nonadd amounts for information purposes.

[3] Amounts reflect grants desired—not in excess of 50 percent of total costs of construction and fixed equipment.

RESEARCH OVERHEAD

Dr. BURNEY. At present, the universities and medical schools are using their funds to pay part of the overhead on research. This constitutes a heavy burden on the limited resources of these institutions.

While the schools may certainly be expected to, and themselves expect to, contribute to the Nation's medical research effort, this should not be detrimental to their basic educational responsibilities. An increase in our support for overhead costs would enable the schools to chart a better balanced course of both research and teaching.

We have suggested, therefore, that the prohibition against payment of more than 15 percent of the overhead costs be lifted. We propose that the increases recommended by the House Committee on Appropriations for the programs of the National Institutes of Health be made available to permit us to support increased amounts for overhead while maintaining our present levels of research support.

COMMUNICATIONS

Senator HILL. I have received a letter from Senator Young, of North Dakota, enclosing one to him from the dean of the school of medicine at the University of North Dakota, in which he urges the allowance of funds to pay the full indirect costs of research.

I also have a letter from Senator Humphrey, of Minnesota, enclosing the letter he received from Dr. Howard, associate dean of the University of Minnesota Medical School, in which he urges the allowance of full indirect costs of research.

These letters will be included in the hearings.

(The letters referred to follows:)

UNITED STATES SENATE,
COMMITTEE ON AGRICULTURE AND FORESTRY,
April 21, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Labor, Health, Education, and Welfare, and Related Agencies, Senate Appropriations Committee, United States Senate, Washington, D. C.

DEAR SENATOR: Enclosed is a letter I just received from Dr. T. H. Harwood, dean of the school of medicine at the University of North Dakota. It would seem that there is considerable merit to Dr. Harwood's suggestion that the percentage of research grants used for administrative purposes be increased.

With warmest personal regards.

Sincerely yours,

MILTON R. YOUNG.

UNIVERSITY OF NORTH DAKOTA,
SCHOOL OF MEDICINE,
Grand Forks, April 14, 1958.

Hon. MILTON R. YOUNG,
United States Senate, Washington, D. C.

DEAR SENATOR YOUNG: I am writing in regard to the health, education, and welfare bill which was recently passed by the House without making provision for more than 15 percent of indirect research costs. In the cases where these costs have been broken down, the average is about 30 percent of indirect cost allowance required to cover the indirect cost. Therefore, the present 15 percent allowable covers only half the indirect cost.

We at the University of North Dakota School of Medicine are doing research work supported by about $10,000 in grants. It would help our medical school and our whole university if the overhead would be raised. Since research is of benefit to the country as a whole and even all mankind, it seems to me the fairest distribution of this cost would be on the broadest possible tax base. I would like to urge you to give this matter careful consideration and see if this overhead cannot be increased from 15 percent to 30 percent.

Sincerely yours,

T. H. HARWOOD, M. D., *Dean.*

UNITED STATES SENATE,
COMMITTEE ON FOREIGN RELATIONS,
April 18, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Health and Welfare, Committee on Appropriations, United States Senate, Washington, D. C.

DEAR SENATOR: As you know, the House of Representatives has sent to the Senate a health, education, and welfare appropriations bill continuing the restriction on medical research grants to universities to 15 percent of the indirect costs of carrying out such research.

As Dean Robert B. Howard of the University medical school of the University of Minnesota, points out in the attached letter, the University of Minnesota's experience, and that of 11 universities with major medical research programs, indicates an average indirect cost allowance rate would be 30.5 percent.

I call this letter to your attention in the hope that you will find it possible to bring up for discussion before the subcommittee the question of raising the maximum allowance for indirect costs to a figure more in keeping with the evidence of actual costs.

Kindest personal regards.

Sincerely yours,

HUBERT H. HUMPHREY.

UNIVERSITY OF MINNESOTA,
THE MEDICAL SCHOOL,
Minneapolis, April 14, 1958.

SENATOR HUBERT HUMPHREY,
Senate Office Building, Washington, D. C.

MY DEAR SENATOR HUMPHREY: I am writing to urge your support of a proposal that Government agencies, notably the Department of Realth, Education, and Welfare, pay the complete indirect costs of medical research carried out under their auspices in the Nation's medical schools and other institutions.

Currently, as you know, the Department of Health, Education, and Welfare, the largest single source of grants in support of medical research, is restricted by Congress to providing a maximum of 15 percent to institutions receiving grants toward the payment of indirect costs of carrying out such research, i. e., plant operation, administrative expenses, maintenance, depreciation, library expenses, and many other items. This figure of 15 percent is acknowledged by those intimately aware of the problem to be much too low. A recent independent survey of 11 universities with major medical research programs indicated that an average indirect cost allowance rate of 30.15 percent would have been required for the fiscal year 1956–57 to recover the actual indirect costs. This figure varied somewhat from institution to institution depending largely upon varying accounting procedures. For the University of Minnesota the figure was 30.65 percent, coinciding almost exactly with the average for the 11 schools.

Unfortunately, the House of Representatives has passed the health, education, and welfare bill for the coming year without providing for payment of indirect research costs beyond the present 15 percent. I am sure that you are aware of the financial plight of the Nation's medical schools today. The situation regarding indirect research costs is most certainly a contributing factor and one which can be remedied.

We hope that the Senate, in considering the health, education, and welfare bill, will make provision for the payment of complete indirect costs of research and that the ultimate action of the conference committee will also be favorable. Knowing of your active interest in medical education and research, I ask your thoughtful consideration of this matter and your help in securing favorable action.

With kindest personal regards, I am,

Sincerely yours,

ROBERT B. HOWARD, M. D.,
Associate Dean.

RESEARCH FACILITIES PROGRAM

Dr. BURNEY. It has now been 2 years that the Public Health Service has administered a program to help build, equip, and modernize health research facilities. In 1958, a total of 141 institutions from 39 States,

the District of Columbia, and Hawaii participated in the program. The 1959 budget request includes $30 million for the third year of this 3 year program. The $60 million awarded thus far has stimulated research construction totaling over $391 million.

Senator HILL. That is a real investment.

Dr. BURNEY. That is almost a 5 to 1 ratio.

Senator HILL. That is right.

Dr. BURNEY. This program has already made a great impact on medical research. It has helped alleviate one of the major bottlenecks—that of inadequate plants and facilities—to expanded research in this country.

TRAINING

Training of health personnel is another vital activity in the Public Health Service. The strength of our research, clinical practice, and public health services depends upon an increasing reservoir of qualified and well-trained personnel.

Within the past year, more than 10,000 individuals availed themselves of training opportunities offered by the Public Health Service. These people ranged from promising young people in medical schools to senior staff members of hospitals, research institutions, and health departments. In duration, the training varied from short refresher courses to full-year academic work.

The net effect has been to add substantially to our national reservoir of health manpower as well as to increase its professional competence. Dr. Shannon will tell you more about the NIH training programs but I would like to devote a minute to training in other areas of health.

For many years, State and local health agencies were losing trained personnel faster than they were training new people. I am happy to report that, as a result of legislation enacted by the Congress in 1956, the downward trend in the number of persons receiving specialized training in public health has been reversed.

Under title I of the Health Amendments Act of 1956, Federal funds financed graduate training in public health for 363 people last year. States and communities concurrently increased their sponsorship of trainees by 8 percent, so that a total of 764 persons were trained last year with either title I or State and local support.

The 1956 legislation also authorized a traineeship program for professional nurses. Funds made available last year enabled schools to provide 798 full-year traineeships for professional nurses to obtain advanced study in teaching and administration. Half of the scholarships went to nurses who will enter the highly important field of teaching.

Senator THYE. Mr. Chairman, would the Doctor mind a question at that point?

APPLICATIONS FOR TRAINEESHIPS

"Seven hundred and ninety-eight full-year traineeships for the professional nurses to obtain advanced study" is what the statement says. What would they have and how many would have been enrolled had it not been for the funds provided by Congress? Would you be able to give us any information on that?

Dr. BURNEY. I could not on the spot, sir, but I could supply that for the record.

Senator THYE. I think that would be most helpful because then you would have the same concrete example of the benefits derived from the dollars invested in the research fund.

Dr. BURNEY. Yes, sir.

Senator THYE. Thank you.

(The information referred to follows:)

Without the funds provided by the Congress, an esitmated 800 nurses would have enrolled in 1956 (fiscal year 1957) and an estimated 600 nurses in 1957 (fiscal year 1958). The trend in enrollment is shown in the following table.

Trend in full-time enrollment in advanced nursing programs in administration, supervision and teaching

Year	Number of nurses enrolled in programs of administration, supervision, and teaching	Number of nurses who would have been enrolled without Federal aid	Number of Federal traineeships
1951	1,876	1,876	
1952	1,688	1,688	
1953	1,355	1,355	
1954	1,057	1,057	
1955	995	995	
1956 [1]	1,337	[2] 800	[3] 551
1957 [4]	1,550	[2] 600	[5] 731

[1] Academic year 1956—Government fiscal year 1957.
[2] Estimated enrollment based on trend ratio.
[3] Does not include the number of traineeships granted to 8 schools of public health and 8 other programs which prepare for this specialty. The total number of traineeships awarded for 1957 was 587 and for 1958, the number is 798.
[4] Academic year 1957—Government fiscal year 1958.

NOTE.—There was approximately a 50-percent decrease in full-time enrollment from 1951 to 1955 prior to the enactment of Public Law 911, title II.

EXCESS OF APPLICANTS OVER VACANCIES

Dr. BURNEY. I might add that there were, as I recall, 3 applicants for every 1 that could be taken. We had several times more applicants for these traineeships from the nurses than we were able to fill.

Senatotr HILL. You did have three applications for every vacancy?

Dr. BURNEY. That was the approximate ratio; yes, sir.

Senator HILL. That is interesting.

OTHER TRAINING ACTIVITIES

Dr. BURNEY. In addition, various other types of training activities were carried out by the Service alone and in cooperation with other agencies. At the Communicable Disease Center, almost 3,400 public health workers were enrolled in 117 short courses relating to laboratory diagnosis, epidemiologic techniques, disaster aid, and new methods in the control of communicable diseases. At the Robert A. Taft Sanitary Engineering Center, training was given to about 1,300 persons in radiological health, waste treatment methods, air and water pollution, and other environmental programs.

Despite the step-up in training activities, there are few communities in the Nation that have fully trained public health staffs. The best that many of them can do in the face of this handicap is to maintain the rudimentary safeguards of sanitation and communicable disease control. The great need today, however, is for adequately

trained personnel in such public health responsibilities as chronic disease control, health of the aging, accident prevention, environmental health, and radiation protection.

The problem is equally great with respect to trained personnel in medical research and education, particularly in view of the expanding needs of a growing population. Last year there were more than 4,300,000 babies born in the United States, and our Nation seems destined for another increase. It has been estimated that in another generation our population will approach 250 million. This growth, coupled with increased demand on our schools and universities, heightens the need for more medical scientists and teachers in the future.

PERSONNEL AND TRAINING NEEDS

I should also like to call to the attention of the committee our personnel and training needs within the Public Health Service. In several of our programs, personnel needs are particularly acute. We cannot, for example, move forward as rapidly as we would like in the Indian health program without an adequate reservoir of well-qualified and well-trained professional people.

The House of Representatives has increased the authorization of regular corps officers of the Public Health Service to 1,900. This will not involve increased employment or expense because the expansion will be achieved primarily by conversion of active duty reserve officers to regular status. It is important, however, for career stability and mobility in that it will permit us to staff more of our key positions with career officers.

Senator HILL. They will be more interested in remaining in the Service and making it their life's work.

Dr. BURNEY. Yes, very much so. There are two important problems in building an adequate professional staff. The first is the problem of recruiting capable young people into a career in the Federal service. The second is the necessity for providing training opportunities that will permit an orderly process of professional growth. Without career development opportunities, it is difficult to attract and retain personnel of high caliber and strong potential.

One of the limiting factors in research is, of course, the adequacy of personnel. The Congress has recognized this need and has provided enlightened support for increases in research training, through fellowships and grants. As a result, progress is being made in this area. Training within the Service, however, remains a substantial problem. I believe it is fair to say, Mr. Chairman, in fact, that we are making greater progress in training people outside the Service than within it. Because our funds for training in the Service are limited and because we lack replacements in staff jobs during a training period, we are actually falling behind in our training responsibilities. These deficiencies must be remedied, I believe, if we are to discharge our increased obligations.

Senator HILL. In that connection, Doctor, what could this committee do to help you to discharge these increased obligations? You need additional funds, I believe.

Dr. BURNEY. We need additional funds so that we can train some of these youngsters as we are training those on the outside in the

marine hospitals and other activities and of people to fill their jobs while they are away on training.

At the present time we find it difficult if not impossible to send one of our young men from our marine hospitals, for example, because our staffing is so thin that we would have no one to take his place.

Senator HILL. Did you ask the Department for any additional funds for this purpose?

Dr. BURNEY. I will have to refer that to Mr. Harlow, sir.

Mr. HARLOW. Mr. Chairman, in our appropriation for salaries and expenses, Public Health Service, there was some additional money requested in personnel activities which would have been used to supplement our training activities.

CUTS IN SOME REQUESTS

There was some money requested for civil defense activities which would have been used for a type of training for the inactive reserve corps. These funds fell by the wayside in processing our estimate.

Senator HILL. Where did they fall by the wayside? In the Department?

Mr. HARLOW. Some in the Department, Mr. Chairman, and some in the Bureau of the Budget.

Senator HILL. What was the amount of those funds, Mr. Harlow?

Mr. HARLOW. I do not have that figure before me.

Senator HILL. Could you supply those figures for the record at this point?

Mr. HARLOW. Yes, sir.

Senator HILL. Give us all the figures, please, sir, and also give us a statement as to where they fell by the roadside, whether within the Department or whether they fell by the roadside in the Bureau of the Budget.

Mr. HARLOW. Yes, sir. In our appropriation for hospitals and medical care there were additional funds requested which would have been used as Dr. Burney indicated so that it would be possible for us to train some of our younger doctors and have someone to replace them.

Senator HILL. In other words, these funds would have been generally for replacement so that your younger men could go and take this additional training; is that right?

Mr. HARLOW. Yes, sir.

Senator HILL. Put that into your statement, too, and give us the amount of those funds. Give us the detailed picture of this whole situation, will you, sir, for the record?

Mr. HARLOW. Yes, sir.

(The information referred to follows:)

REDUCTIONS IN ESTIMATES FOR TRAINING OF PUBLIC HEALTH SERVICE EMPLOYEES

Salaries and expenses

Reduction by Department of Health, Education, and Welfare	$33,225
Reduction by Bureau of the Budget	380,000

Funds in the amount of $33,225 were requested to strengthen the training staff in the Division of Personnel and to initiate a traineeship program for accountants and auditors in the Division of Finance. The request for $380,000 was included in the Federal Civil Defense activity and would have been used to conduct a training program for members of the inactive Commissioned Reserve Corps.

Hospitals and medical care

Reduction by Department of Health, Education, and Welfare	$193,000
Reduction by Bureau of the Budget	222,000

The training funds requested under this appropriation would have been used principally for advanced training of professional personnel in outside institutions.

Assistance to States, general

Reduction by Department of Health, Education, and Welfare	$470,600

This amount was proposed for career development training either in outside institutions or by assignment to States. Included in the estimate was $305,600 for technical assistance to States, $55,000 for health of aged and chronic disease, and $110,000 for accident prevention.

Sanitary engineering activities

Reduction by Department of Health, Education, and Welfare	$210,000
Reduction by Bureau of the Budget	66,000

The amount disallowed was under the Radiological Health activity and would have been used for advanced training in radiology and radiological health either in outside educational institutions or by special assignment.

National Heart Institute

Reduction by Department of Health, Education, and Welfare	$110,000

This amount would have been used for career development training particularly in the area of professional and technical assistance.

Indian health activities

Reduction by Department of Health, Education, and Welfare	$243,000
Reduction by Bureau of the Budget	77,000

Although not specifically earmarked for this purpose approximately the above amounts would have been utilized for training of personnel if estimates had been approved as submitted. The contemplated program would cover advanced training of professional personnel and also provide for training of subprofessional employees.

NOTE.—Most of the above action resulted from Public Health Service distribution of larger cuts rather than from a specific reduction in training funds by either the Department of Health, Education, and Welfare, or the Bureau of the Budget.

SCHOOLS OF PUBLIC HEALTH

Senator HILL. While we are speaking about training, as you know we have legislation pending both in the House and Senate for funds to help our schools of public health. There are about eleven of those schools in the country, are there?

Dr. BURNEY. There are eleven including the one in Puerto Rico.

Senator HILL. I believe there is a study being made as to the needs of those schools and the need for additional schools of public health.

Dr. BURNEY. Yes, sir. The Congress, when it passed the Trainee Act of 1956, requested or directed us to have an assessment made of both the training that had been done and the unmet needs in training and to report to the Congress as of next January 1959, so that we are convening some outside groups to work with us. We have had one meeting already. These will be both on the nursing and the general public health. The report will be forthcoming to the Congress by next January.

Senator HILL. That report will give us the detailed information as to the needs of your present schools of public health and as to any needs for any additional schools of public health; is that right?

Dr. BURNEY. Yes, sir. It will go into more than just an assessment of what has been done. It will go to what is needed.

Senator HILL. Looking to the future which you have so well summarized in your statement, not only what we need today but what we will need 10 or 20 or 25 years from now, is that right?

Dr. BURNEY. Yes, sir.

Senator HILL. It will be a detailed, comprehensive report, will it?

Dr. BURNEY. Yes, sir. I said here that within a generation we expect to have about 250 million people and we need more physicians and all types of health personnel to meet that.

Senator HILL. You need more staff in the Public Health Service.

Dr. BURNEY. I would suspect so, yes, sir.

Senator HILL. I would think that that would be very definitely true and I agreed with your statement earlier that after all the strength of the Nation was basically in the people of the Nation.

All right, Doctor.

COMMUNITY HEALTH SERVICES

Dr. BURNEY. Wider use of the knowledge we now process about cancer, heart disease, accidents, and other major health hazards could save many lives and restore some measure of independence to thousands of chronically ill, aged and handicapped persons. We know that chronic conditions, for example, develop slowly, and that in many cases the disease can be detected early when there is opportunity for effective treatment.

The delivery point for such services is obviously the home community. States and Federal agencies, however, play a crucial role in making local programs possible.

To illustrate, let me cite a specific example: One of the very important dividends we have thus far reaped from the investment in cancer research is the discovery that uterine cancer in women can be detected by simple cytologic tests on the average of about 5 years before definitive symptoms appear and at a time when it is almost always curable.

This test is already being used in physicians' offices, universities, clinics, and hospitals. Deaths from uterine cancer have been decreasing, and early detection made possible by cytology has played a substantial role.

The cytology test has developed to the point where it can be increasingly incorporated into preventive medicine and public health. Within the past year, State and local diagnostic resources have begun to use the technique with greater frequency. We are working with medical societies, voluntary agencies, universities, and State and local health agencies to stimulate wider application of this test.

Senator THYE. Doctor, both Senator Hill and I have served on this committee for several years. Both of us, I believe, have endeavored to increase the appropriations for these fields of research to which you have just now referred. I personally have known that I was subjected to some criticism for being too much of a do-gooder. I think you have probably seen that said in some national publications, so that it is encouraging to me to see your remarks as stated here in this prepared statement on this one question that I know for which I personally have been criticized as a do-gooder because I have advocated some of these increased funds in the field of research.

It is gratifying to have your remarks that sort of support the effort that some of us have endeavored to make in the field of research.

APPLICATION OF CYTOLOGIC TESTS

Dr. BURNEY. Thank you, sir. We believe so strongly in it that we would like to see it much more widely applied.

At the same time, we are studying the feasibility of applying the cytologic test to detect early cancers of the lung, gastrointestinal tract, and other body sites.

The field of tuberculosis provides another illustration of the prompt use of new knowledge.

Senator HILL. You have hope in applying these tests to lungs and the gastrointestinal tract, and other body sites?

Dr. BURNEY. I suspect Dr. Heller will go into that in more detail.

It is more difficult, of course, than the test of cancer of the uterus, but there you can see the site from which you gather the cells, but there are some promising leads in the gastrointestinal and lung cancer.

DRUG TREATMENT OF TUBERCULOSIS

As the result of a cooperative clinical investigation organized by the Public Health Service in January 1955, it has been shown that isoniazid is 80 percent effective in preventing the complications of tuberculosis among children. We have, therefore, recommended that infants under 1 year of age with positive tuberculin tests, and children from 1 to 3 years of age with X-ray evidence of tuberculosis, be treated with daily doses of isoniazid for a year.

In addition, we are conducting further studies to determine the duration of protection after the drug is discontinued and to discover whether similar protection can be given other groups in the population and under different conditions. Trials have already begun, on a selective basis, in about 40 communities and institutions in 16 States. In this effort, we are working closely with State and local health departments, and professional and voluntary groups.

NEED FOR FEDERAL-STATE COOPERATION

As our body of knowledge increases, so does the need for this type of Federal-State cooperation. Last year there was an increase in the general health grant for the development of new program. This was highly successful in encouraging a more venturesome approach to mounting health problems, particularly those of the aging. Many States either started or expanded new programs. For example, diabetes control programs were begun or strengthened in 16 States, home nursing services in 13 States, glaucoma control in 6 States, and nursing home pragrams in 22 States.

The general health grant was also used to support such new activities as accident prevention and radiological health programs as well as for such basic activities as local health services, communicable disease control, and training.

Senator HILL. Did the budget allow you the same sum for the coming year as for this year?

Dr. BURNEY. Yes, sir.

Senator HILL. As I recall those funds were increased by the Congress last year by $3 million.

Dr. BURNEY. Yes, sir.

We believe particularly in the need for the development and improvement of local health services. Local health services are the cornerstone of public health work in this country.

Senator HILL. Doctor, I am glad to hear you say that. I have been fearful that we have been retrogressing from that principle that you have just declared there, a tendency to get away from the basic logical public health work. All you would have to do would be to see the recommendations in the budget for the last several years to see that.

I am gratified to hear you say that.

Dr. BURNEY. We believe very strongly in that in the Service, sir.

Our total national effort to prevent disease and premature death, and to prolong and strengthen life depends, in the last analysis, on the local community. We intend to continue to give strong support to local health services in the interests of community and national health.

Senator HILL. Of course, as the State health officer of the State of Indiana, you were in position to see this at first hand in a most intimate way. In fact, you lived with it day by day, did you not?

Dr. BURNEY. Yes, for 9 years.

In addition, the gains which have been made in the past year need to be preserved and extended. Newly developed services should become a firm and continuing part of community health programs, and should be provided by an increasing number of health agencies. One of the primary purposes of the general health grant to the States is to further such progress, and reductions in this grant below the budget request for 1959 could jeopardize the very promising work that was begun last year.

In February of this year, the first National Conference on Nursing Homes and Homes for the Aged was held, under Public Health Service sponsorship. We were greatly impressed with the results of that conference. A series of proposals were adopted that will, we believe, guide the development of institutional and community services for the chronically ill and the aging for some years to come. These recommendations include the development of suitable standards and of model laws and regulations regarding the operations of these facilities, the licensing of nursing home administrators, the collection of information on a continuing basis, and additional training for nursing home personnel. Undoubtedly, many States and communities will strive to put these recommendations into effect in the years ahead.

REQUEST FOR RESTORATION OF HOUSE CUT

In view of all these promising developments, we cannot too earnestly argue the need for restoring the reduction made by the House, thus maintaining the assistance to States appropriation at the level requested.

Senator HILL. What was the amount of that reduction?

Dr. BURNEY. $889,000 although I believe $315,000 of that was for civil defense.

Senator HILL. There were a half million dollars for the grants for your State health departments and local public health units.

Hospital and Medical Facilities

Dr. Burney. That is right, sir.

Closely related to the development of new community services are facilities for care of the sick and disabled. Under the Hill-Burton program, more than 3,700 projects have been completed or approved for construction since the legislation was enacted by the Congress in 1946. They will add more than 161,000 beds and 974 public health centers and other facilities providing out-patient care to our total health resources. The Federal share of these projects is $957 million. This has been matched by over $2 billion in State and local funds.

To date, 400 projects have been completed or authorized for construction under the 1954 amendments to the program. These include 66 rehabilitation centers, 153 diagnostic and treatment centers, 99 nursing homes, and 82 chronic disease facilities.

We believe our 1959 budget request for this program—which remains at the current level of $121.2 million—will meet the most urgent need for new facilities.

Like community programs, hospitals and health facilities need to be geared to the health problems of an aging population. The whole concept of institutional care is being subjected to searching scrutiny and reevaluation today. Experimentation is underway, for example, in suiting the care given to the need of the patient. Under one such plan, called progressive care, the patients are moved from intensive care to intermediate care and then to self-service as their condition improves. The Public Health Service is studying this development with the hope that it will lead to greatly improved patterns of hospital care at less cost to the patient. Some 7,000 hospital are being surveyed to determine the extent to which the idea of progressive care has been incorporated into hospital practice.

Public Health Service grants are also supporting other important areas of hospital research. Several studies are being made, for example, of ways of adapting modern industrial and administrative business methods to the hospital setting.

In all, however, the Public Health Service contributes less than $1.2 million for hospital research directly, although some National Institutes of Health grants are related to hospital studies. This sum is modest indeed in light of the magnitude and importance of the Nation's hospital plant today. Hospitals employ about 1,400,000 people and account for $6 billion annually of the Nation's gross expenditure. Enterprises of comparable size could not progress very far in our modern economy without substantial and continuous research as a basis for future operations.

ENVIRONMENTAL HEALTH

In environmental health, there are many new and challenging problems that call for investigation, appraisal, and control efforts. Our ever-growing industrialization and urbanization keep adding to the complexity of our physical environment. Tremendous problems of air and water pollution have been created by the host of new substances now used in industry, agriculture, and the home.

With the additional funds appropriated for fiscal year 1958, good progress has been made under the programs authorized by the Water Pollution Control Act. It is therefore important that funds requested

for water pollution control programs in 1959 be provided in order to sustain this progress. The fact that 100 million people in the country now depend on surface waters underlines the need for pressing our programs in water supply and water pollution control vigorously.

As yet not very much is known about the long-term effects on human health of the nonliving contaminants now found in drinking water and in the air. Our engineering programs are therefore directed toward developing techniques for identifying and measuring these pollutants, gaining a better understanding of their behavior in air and water, and devising methods of prevention and control.

I have already cited a promising breakthrough in one phase of our water pollution research program, relating to the treatment of sulfite wastes. This constitutes, of course, but a fraction of the total problem of water pollution in this country. But I believe it illustrates the potential of laboratory and field work toward the ultimate solution of such problems.

We have also established a national network of sampling stations for both air and water pollution. There is now at least one air sampling station in each State. These are our surveillance posts for identifying, analyzing, and learning more about contaminants in the atmosphere.

Environmental health work such as this is of the utmost significance to the Nation's health, and we hope it will be supported at the level of our 1959 budget request.

Radiation represents another rapidly growing environmental health problem. The familiar sources of radiation used in medical research, diagnosis, and treatment have not only expanded greatly but have been supplemented by the development of nuclear energy for military and industrial uses. The result has been to multiply the opportunities for exposure and increase the urgency that every controllable exposure be reduced to the lowest practical level. Every such reduction will be toward man's health and safety.

As our next step, we plan to stress anew the control of unnecessary exposure from medical, dental, and industrial sources of X-rays. For most people, these constitute the major lifetime sources of exposure to manmade radiation. With the proposed increase in funds for radiological health in the 1959 budget, we will work with State and local health agencies in developing programs to identify and deal with hazardous radiation sources. Radiological health, particularly, requires highly trained experts, and one of our major activities in this field will be directed toward the training of radiological health workers.

In addition to establishing an advisory group, under the chairmanship of Dr. Russell Morgan, of Johns Hopkins University, to evaluate the national problem and future requirements, we have adopted a unified approach to all our radiation activities in the Service. Thus, we have established, with the approval of the Secretary, a new Division of Radiological Health, combining the medical and engineering phases of the program.

Senator HILL. You speak of providing medical and engineering phases. Where do you draw your engineering personnel from?

Dr. BURNEY. We have had, Mr. Chairman, actually, more activity and interest from our engineers in radiological health than from the

medical group, so that we had a very small corps of engineers who had had training and experience in radiological health and only a few physicians.

Much of that work had been done in working with AEC on a contract basis in the matter of disposal of radioactive waste.

With greater medical uses of X-ray and the knowledge that much could be done to reduce the hazards of exposure in these users without minimizing the effectiveness and usefulness of X-rays in diagnosis and treatment, we decided to combine these two activities, but I would hasten to add that we do not have but a small corps of people in this activity.

We have had many requests from the States to loan them individuals to help them get a program started, which we think is a very good thing to do but, with 1 or 2 exceptions, we have not been able to comply with those requests.

Senator HILL. Do you have sufficient funds in this budget to really carry this program forward adequately?

Dr. BURNEY. This will allow us to make more progress than we are making in this present year.

Senator HILL. I think there is a new emphasis now, is there not?

Dr. BURNEY. There certainly is. The Department has supported us very completely in our feeling that the Public Health Service, with the States, has a greater responsibility in radiological health. I can say, quite frankly, that I do not remember what we asked for, but I do remember that the Department supported us in our requests for funds.

Senator HILL. The Department did not reduce you?

Dr. BURNEY. I do not believe so.

BUDGET REDUCTION

Senator HILL. How much did the Bureau of the Budget reduce you?

Mr. HARLOW. They reduced it from $1 million to $608,000, a $392,000 reduction.

Senator HILL. That is about a 40-percent reduction. The Department supported the whole million-dollar request?

Dr. BURNEY. Yes, sir.

Mr. HARLOW. Yes, sir.

Senator HILL. You might supply for the record a detailed statement as to just why you needed this additional $390,000; if you had it, how it would be expended; whether it would go for personnel and, if so, what personnel, and the need for it.

Mr. HARLOW. We can justify that.

(The information referred to follows:)

Effect of $392,000 reduction in 1959 estimate for radiological health activities

	Budget request		Bureau of the Budget allowance		Difference	
	Positions	Amount	Positions	Amount	Positions	Amount
RESEARCH						
1. Implementation of epidemiological studies on human groups incidentally exposed to radiation in the healing arts and industry. Particular groups to be studied include (1) children heavily exposed during treatment for ringworm; (2) workers exposed to radiation in their daily working routine	9	$80,000	7	$54,000	−2	−$26,000
2. Continuation of present minimal studies of human and animal levels of uptake of environmental radioactive contaminations	1	10,000	1	10,000		
3. Developmental activities on technical improvements in equipment and its operation to reduce exposures in the healing arts	1	10,000	1	10,000		
4. (*a*) Studies begun in 1957 fiscal year and project expansion through 1958–59 relating to the facts of radioactive materials in the environment and the determination of background levels, fallout, rainout, and the concentration of radioactivity in cisterns and streams, and development of analytical methods of radiation assessments	9	93,000	6	54,000	−3	−39,000
4. (*b*) Studies in radiochemical and radiometric analysis as part of the identification of radionuclides and evaluation of the potential hazards from the presence of specific isotopes in the environment	10	102,000	8	78,000	−2	−24,000
5. Research regarding activity of coolants, associated with increased number of nuclear facilities, which reach the environment regardless of waste-treatment measures taken by the installation	5	55,000	1	10,000	−4	−45,000
TECHNICAL ASSISTANCE						
1. Basic regional staffing.						
2. (*a*) On-the-spot technical assistance through short-term assignments to States. Expanded technical assistance to the States for specialized consultation. Continued liaison with international, National, State, and local organizations active in radiation protection, particularly in industry and the healing arts	2	20,000	2	20,000		
2. (*b*) Consultation and help in program development in States	5	35,000	4	30,000	−1	−5,000
3. Local demonstration projects in the application of radiation exposure, prevention, and control methods, particularly in the industry and the healing arts	9	75,000	7	60,000	−2	−15,000
4. Headquarters staff to coordinate the activities and to provide nationwide program direction through the development of procedural manuals, guides, technical reports	15	89,500	10	52,500	−5	−37,000
TRAINING						
1. State and local	19	173,000	11	78,000	−8	−95,000
A total of 15 courses for approximately 505 trainees will be given in the following subjects:						
(a) Basic radiological health (SEC).						
(b) Sanitary engineering aspects of nuclear energy.						
(c) Detection and control of radioactive pollutants in water.						
(d) Environmental health aspects of nuclear reactor operation.						
(e) Occupational radiation protection.						
(f) Radiation safety (for X-ray technicians).						
(g) Public health aspects of radiation (for medical personnel).						
(h) Field courses and demonstrations.						
(i) Seminar in radiological health aspects of milk and food.						
(j) Detection and control of radioactive pollutants in air.						
(k) Determination of radionuclides.						

Effect of $392,000 reduction in 1959 estimate for radiological health activities—Con

	Budget request		Bureau of the Budget allowance		Difference	
	Positions	Amount	Positions	Amount	Positions	Amount
2. Public Health Service personnel: 4 medical officers in advanced training in radiology and radiological health; 1 medical officer in training in clinical radiology for future utilization in control projects in the healing arts; 1 officer in training in public health for future use in program services; 1 officer on training assignments to national reactor test site; 1 epidemiologist in training; 2 nonmedical officers in specialized training in biostatistics; 5 engineer officers in training	17	$193,000	14	$127,000	−3	−$66,000
Total	110	1,000,000	76	608,000	−34	−392,000

REVIEW OF RADIOLOGICAL HEALTH ACTIVITIES

Senator THYE. What was the sum last year?

Mr. HARLOW. $393,000 in the current appropriation, Senator.

Dr. BURNEY. We have also reviewed our plans for radiological health activities with the Atomic Energy Commission. We are in joint agreement that the public health aspects of radiation exposure need the additional attention proposed in these estimates. Arrangements have also been made with Admiral Strauss for the General Manager of the Atomic Energy Commission to meet with me from time to time on policy matters relating to radiological health and to maintain the effective coordination of our own programs.

COMMUNICABLE DISEASES

Turning to communicable diseases, we find the basis both for encouragement and for more intensive efforts. Reductions in prevalence and mortality of a number of infectious diseases are a familiar and heartening story. Yet many communicable diseases are still largely unsolved and exert a tremendous impact on the Nation's economy.

We have not yet effectively controlled the acute upper respiratory diseases, for example. It is an impressive fact that during 30 weeks in the first wave of the Asian influenza epidemic, acute upper respiratory diseases accounted for more than 435 million days of illness in bed. Moreover, a rather sharp increase in deaths attributable to influenza and pneumonia occurred. Even though the medical and public health professions were fully prepared in advance to deal with the thread of a widespread, severe influenza epidemic, we could not avert the total impact of this group of diseases.

Yet the epidemic could have had much more serious consequences here. That it didn't is due to the planning and preparatory work of the Nation's health agencies, both public and private, to the pharmaceutical industry, and to the action of the Congress in speedily making supplemental funds available for influenza control. As a result, a comprehensive program was developed before a single case occurred in this country. The United States is the only nation in which such a record was made. There is little doubt that production and use of the new vaccine protected many thousands of people.

Senator HILL. We really did a fine job on that, did we not?

Dr. BURNEY. I think we did, yes, sir. We certainly set a good example, too, of how various professional groups and officials and volunteer groups can work together and mobilize very quickly.

During the influenza epidemic, too, valuable research on viral diseases in general was planned and put into operation. State and local surveillance of influenza helped provide essential data for such research. Moreover, through the local-State-Federal health system, we were able to make gains in public health methodology and the application of new knowledge.

PROGRESS AGAINST POLIO

Another important event of the past year is the progress against poliomyelitis. The total number of poliomyelitis cases reported to the Public Health Service dropped from 15,000 in 1956 to less than 6,000 in 1957—a reduction of 62 percent. There was an even sharper decline in cases of paralytic polio, from about 8,000 in 1956 to slightly more than 2,000 this year, or about 73 percent.

A large part of this reduction is undoubtedly due to the use of the poliomyelitis vaccine. Some 76 million persons aged 40 and under, however, are not yet fully vaccinated, and about 46 million of them have had no vaccine at all. We are at present using all the means at our disposal to promote vaccination of this group. In this effort we are joined by the State and Territorial Health Officers, the American Medical Association, the National Foundation for Infantile Paralysis, and the Advertising Council.

Senator HILL. I know that you have been doing your very, very best but it is surprising how many people failed to take advantage of this what may well be a golden opportunity to get this vaccine.

Dr. BURNEY. It is hard to understand.

Senator HILL. I learned a lesson once. I had typhoid fever. If I had taken the vaccine which my father sent me to take I am sure I would not have had that typhoid fever but I put it on the mantelpiece and did not take it, so that I had the fever. And I lived in the doctor's house.

Dr. BURNEY. One out of four persons under 20 years of age has received not a single injection. That is the most susceptible group.

Senator HILL. You have done everything you could with the help of the press and other means of communication to let the people know how important it is for them to take this vaccine. Too many of them put their vaccine on the mantelpiece, I guess.

Dr. BURNEY. They probably do.

UNITED STATES NATIONAL HEALTH SURVEY

For the first time in over 20 years we are actually getting accurate and continuing knowledge on the extent of illness and disability in the population through the national health survey, authorized by the Congress in 1956.

The survey has just completed its first full year of operation. The pilot study and the first quarter-year of sampling—July–September 1957—have been completed, and first reports have just been issued. As of August 1, 1957, for example, survey findings revealed that chronic conditions affected some 17 million Americans. For nearly

4 million of these people, the main activity of their lives was not possible—the worker could not work, the housewife could not take care of her home and family, and the child could not go to school.

These findings are confirming the hunches and the more limited surveys health workers have had to rely on in the past. They are providing the bases for planning health services to meet more adequately current and changing needs. Moreover, the results of our survey are being eagerly watched by many groups. Information of prime importance will be available to voluntary organizations, other Government agencies, insurance carriers, and many other business enterprises. We believe these formative years of the survey are its most significant years, and we hope to continue to emphasize this activity.

Senator HILL. Speaking about your surveys, how necessary is it to keep these surveys current, keep them up to date?

Dr. BURNEY. It is extremely necessary, sir. That is really the basis for this national health survey which provides, as enacted by Congress, for continuing surveys of various geographic and economic groups throughout the country.

Senator HILL. I want to bring out that we must continue these surveys. We must not do as we did before, make a survey 25 years ago, and then do nothing about it.

Dr. BURNEY. 1936 was the last one.

Senator HILL. We must keep these surveys up to date.

PUBLIC HEALTH SERVICE HOSPITALS

Dr. BURNEY. Our oldest program is the administration of Public Health Service hospitals and clinics. Last year, we asked some of the Nation's leading experts in hospital administration and medical care to help us evaluate our problems in five hospitals. Now all of the hospitals have been studied. The findings were similar to those reported last year. Deficiencies in hospital plant, personnel, supplies, and equipment were specifically noted. In some instances, shortages were so acute as to affect seriously the quality and quantity of hospital care.

Last year, we received the first increase in regular appropriations for the operation of our hospitals for some time. This helped to alleviate a few of the most pressing needs in the way of badly needed supplies and equipment. We still have far to go, however, in bringing our hospitals to modern standards.

REDUCTION IN HOSPITAL FUNDS

Senator HILL. Were you reduced much in your request for funds for these hospitals?

Dr. BURNEY. We were. I will have to ask Mr. Harlow for the exact amount.

Mr. HARLOW. $2,691,000 reduction, Mr. Chairman.

Senator HILL. Where was that reduction made?

Mr. HARLOW. That was in the President's budget.

Senator HILL. You mean the Department concurred in the request for the $2,691,000 and then the Budget reduced it?

Mr. HARLOW. Yes, sir.

Senator HILL. I see. It does seem to me that if the United States Government is going to run these hospitals that we ought to run them

according to modern standards. We ought not to have second- or third-class hospitals.

I realize that to have them up to modern standards you have to have funds with which to operate.

Dr. BURNEY. We are not interested in running second-class hospitals and I do not believe that the Congress is interested in providing that type of care.

Senator HILL. I am sure you gentlemen in the Public Health Service are not interested in that.

Dr. BURNEY. Yes, sir.

Senator HILL. It is not helpful to the Public Health Service. It is not helpful to its prestige and standing. It is not helpful to its influence and persuasion of the people in some of these other matters about which you have been talking this morning, Doctor. It that right, Senator Thye?

Senator THYE. I concur.

Senator HILL. You might give us for the record a breakdown of just how these additional funds would be expended if you had them, the funds which were denied by the Budget. I know that we will have some other evidence from outside witnesses in support of more funds for your hospitals.

You might give us that breakdown for the record.

(The material appears under the item for "Hospitals and medical care" on p. 594.)

Senator THYE. Mr. Chairman, when do you expect to have the outside witnesses appear?

Senator HILL. Senator Thye, it will be, I think, about May 12.

Senator THYE. I met with some men that have been very prominent and served on national committees in Minneapolis when I was out there last week. They were very much interested and in fact sent back with me some documents which I have studied. I would like to arrange to have someone representing this group appear before this committee at the time that you have outside witnesses especially Mr. George Dayton, because he was one of the men in Minneapolis that talked to me that day that I was out there.

Senator HILL. We will be happy to do that. May I ask, Senator, that you let Mr. Downey know just what day you would like to have him come?

Senator THYE. Yes, sir. It will be to the convenience of this committee. If Mr. Downey tells me when the outside witnesses will be before the committee, then we can advise them and they can adjust their schedule out in Minnesota.

Senator HILL. Is there any particular day, Mr. Downey?

Mr. DOWNEY. We have Thursday and Friday for the NIH witnesses, sir.

Senator HILL. Monday, Tuesday, or Wednesday of that week, May 12, 13, or 14.

Senator THYE. May 14, I believe, would be the most desired. We have the Minnesota central activities out in the State that compel me to be there Sunday, May 11. My return on May 12 is questionable. Therefore, I prefer May 14.

Thank you, Mr. Chairman.

Senator HILL. Doctor, we trespassed on your time and took up some problems of the committee.

Dr. BURNEY. We consider this a very important problem, Mr. Chairman, not only for the care of the patient which is our primary concern, but also because if we are going to attract young officers into the service through our marine hospitals which has been the major entrance into the Service, we have to have good services or they are going to say, "If this represents the kind of service that you have in the Public Health Service, we are not interested."

Senator HILL. Unless they have the tools they will feel that they cannot do their best work and it would certainly be no encouragement to them to come into the Service.

Dr. BURNEY. We are having to use our marine hospitals now as the staffing for the Indian health hospitals with the key people in medicine and surgery.

FUND INCREASE FOR LEPROSARIUM

We appreciate the action of the House of Representatives in making increased funds available for research at our hospital for patients with leprosy at Carville. We have long felt the need and desirability of conducting clinical research in our hospitals. We hope that future budgets may find the means for the same lifesaving measures at other hospitals. Clinical research in Public Health Service hospitals will be an important path both for improved services and for attracting and training well-qualified personnel.

Since we cannot possibly offer young physicians the same kind of economic opportunities that are available outside the Government, we must train our own personnel. In order to encourage doctors to stay in the Service after training, we need to offer opportunities for specialized experience, for advanced study, and for research. There is no substitute in the practice of medicine for this kind of experience and training in a modern hospital situation.

We are attempting to provide training and research opportunities on a very limited scale in order to provide better patient care and to promote career development. Because of the difficulty in obtaining the necessary medical personnel for our hospitals whenever a member of the staff is detailed for training elsewhere, an important staff position is not covered. It is thus difficult for us to provide our young physicians with the kind of postgraduate experiences that are necessary for modern medical care.

The limited number of specialists in the Service handicaps us in providing the specialists needed to staff our hospitals properly. This further emphasizes our need for training and research programs in the Service.

INDIAN HEALTH

Since July 1955, the Public Health Service has had the responsibility for providing health services and medical care for approximately 343,000 American Indians and 37,000 Alaska natives.

A few weeks ago, I visited some of our area offices and Indian health installations in the Southwest, accompanied by Mr. Rufus Miles, of the Department, and Dr. Lowry.

I was pleased not only with the gains that have been made in the past 2 years but with the increased demands for health services by the Indian people. I had the opportunity to speak with several tribal leaders who expressed their pleasure both with the improvements in

quality and the increase in quantity of health services. I was impressed particularly with the devotion to duty of the young medical officers assigned to the Indian health program, and I should add nurse officers, who are working in isolated areas under extremely difficult conditions. They are doing an outstanding job in the face of many handicaps.

For example, the tuberculosis death rate among Indians has declined from 46 per 100,000 population in 1955 to 37 per 100,000 today. New cases of tuberculosis among Indians in the United States have dropped 30 percent. The death rate for gastroenteric diseases has been cut nearly in half—from about 50 to 26.5 deaths per 100,000 population.

Health services for Indians have also increased steadily. Hospital admissions are now 32 percent higher than they were at the time of the transfer of the program to the Public Health Service. The average patient load is 13 percent higher, and hospital births have increased by 10 percent. Outpatient medical services are 33 percent higher in hospitals and 22 percent higher in health centers. Field health services have been extended on a regular basis to numerous isolated locations in the United States where no service, or limited emergency service only, was provided in the past.

On the other hand, I was distressed at the inadequacy of facilities, the poor quality of housing, and the lack of opportunity for appropriate training. These needs must be met if we are to discharge our responsibilities for the health of the Indian people. We intend, therefore, to give this program an even higher priority in the immediate future.

As one step toward this goal we have asked a task force of consultants from outside the Government to help us review the organizational pattern and operations of our Indian health program. This group by the way included Dr. Robert Barr, the State health officer of Minnesota. The group visited Indian hospitals, clinics, area offices, and other installations, and met with representatives of the Indian tribes and with State and local health officials. Although considerable progress was noted, the task force reported serious deficiencies in staffs and facilities, and recommended further improvements in services.

We are now engaged in implementing these recommendations. In doing so, we plan to draw on the total resources of the Public Health Service.

The Indian health program is one of the most complex responsibilities of the Service. Most of the Indian beneficiaries live in areas in which health and natural resources are either minimal or nonexistent. Distances are vast, and isolation represents a perennial problem. The economic, educational, and cultural conditions of Indian life call for specialized planning and services. In view of all these problems, I am myself devoting an increased portion of my time to facilitating the progress of Indian health.

The increase provided in the Indian health appropriation last year was more than offset by higher costs and mandatory charges, such as increased Government contributions to the civil service employees' retirement fund.

At this point, I would like to stress again our vital need in the Service for recruiting and training professional personnel. The two

programs I have just mentioned—Public Health Service hospitals and Indian health—point up the crucial nature of our personnel requirements. The authorization of additional regular corps officers provided by the House will not add significantly to our strength since it constitutes no budget increase. Lasting progress in our programs depends on people, well qualified and in adequate numbers. We must devote all our energy to building such a staff.

CUT IN INDIAN HEALTH FUNDS

Senator HILL. I wanted to ask Mr. Harlow about your request to the budget for Indian health services. Were your funds cut down by the Department?

Mr. HARLOW. Yes, sir. We requested $48 million. The Department requested $45 million. And the Budget Bureau allowed $40,225,000.

Senator HILL. You were reduced nearly $5 million under your original request; is that right?

Mr. HARLOW. Under the Department's request; yes, sir.

Senator HILL. What part of the $5 million would have gone to physical facilities and what part to personnel? You might give us a breakdown on that so that we will have that full picture.

Mr. HARLOW. None of that was for facilities, Senator Hill. None of that particular item was for facilities.

Senator HILL. The approximately $5 million was all for operations which means largely for personnel, of course?

Mr. HARLOW. Yes, sir.

Senator HILL. On the construction end, your original request was $7½ million, was it?

Mr. HARLOW. Yes, sir.

Senator HILL. The Department reduced that to $6,200,000?

Mr. HARLOW. Yes, sir.

Senator HILL. And the Bureau of the Budget reduced it to $2,374,000?

Mr. HARLOW. Yes, sir.

Senator HILL. I realize that we will have the heads of the different divisions to testify on these different matters, but I think we ought to have the full picture both as to the operation funds and as to your construction funds and just how these funds would be used.

Will you supply that for us?

Mr. HARLOW. Yes, sir.

Seantor HILL. Detail what you would have done with your operation funds, how many additional personnel, what that personnel would have constituted, the breakdown, and also what you would have done so far as your physical facilities are concerned in the matter of equipment and all that.

Dr. BURNEY. We will be happy to supply that.

Mr. HARLOW. Do you want that with respect to our original request and also with respect to the Department's allowance?

Senator HILL. Yes, I want both.

Mr. HARLOW. I see.

(The information referred to appears on p. 624 and 642.)

BUDGET SUMMARY AND CONCLUSION

Senator HILL. All right, Doctor.

Dr. BURNEY. The total budget which the Public Health Service is presenting amounts to $568,289,000. About two-thirds of these funds would be obligated as grants to the States or non-Federal institutions.

The 1959 request is substantially the same as was appropriated for the current fiscal year. In some instances we have been able to meet the needs for additional funds for certain essential programs by curtailing or eliminating activities with a lower priority.

We realize that the committee must consider the programs presented by our 1959 budget request in terms of dollars and cents, and in terms of other essential activities of the Federal Government. Yet I hope that the committee will be aware of the human problems with which we deal in our various programs and of the effect of those programs on the total well-being of the Nation. High levels of health are indispensable to our national progress, now and in the future.

In conclusion, I hope that our budget proposals will receive your favorable consideration. I want to thank you, Mr. Chairman and members of the committee, for your continuing interest and thoughtful study of the programs and responsibilities of the Public Health Service. Our program officers are available to provide you with any additional information you desire in considering our appropriation for 1959.

Thank you for an opportunity to make a very long presentation.

Senator HILL. Let me go back to the Indian health hospital facilities.

I note that you stated:

> On the other hand, I was distressed at the inadequacy of facilities, the poor quality of housing, and the lack of opportunity for appropriate training.

What about the lack of personnel?

Dr. BURNEY. We have a lack of personnel much of which involves a need for more mature and better trained officers. In other words, most of the men whom Dr. Lowry and I saw were the 2-year men serving out their obligated service. They are serving in small hospitals and health centers.

We saw several places, for example, where they were not doing any surgery because there was no surgeon.

We had no one to supply them.

In a number of places pediatrics is their major health problem among the Indians. About 50 percent of all of our problems relate to pediatrics.

Senator THYE. If they were not doing any surgery, where would the patient have the surgery done?

Dr. BURNEY. The most urgent ones were being transferred to the larger Indian hospitals for surgery and that which was not most urgent was just not being done. Some of it, of course, is being done in contract hospitals; for example, at the Bernalillo Hospital in Albuquerque, N. Mex.

Senator HILL. Doctor, I want to say that you brought us an excellent statement. I think Senator Thye will agree that it is a most gratifying statement.

Senator THYE. Certainly.

Senator HILL. It shows the excellent work you and the Public Health Service are doing and the fine way in which these programs which this committee and the Congress have supported are working out.

I wish every person in the country could have heard your statement here this morning and have the knowledge of what is being done and the results that are being attained.

I have been very much disappointed that the Budget Bureau has moved so slowly in this matter of your additional construction projects here in Washington. I refer to your additional surgical facilities and your plans for your dental research building and your plans for your general office building at the National Institutes of Health. Could you give us any information on that or make any comment on that?

STATUS OF LOCAL CONSTRUCTION PROJECTS

Dr. BURNEY. Mr. Kelly, I think, knows the status of those. I think there have been changes in the last few days.

Mr. KELLY. We are pleased to say, Mr. Chairman, that we have been authorized as we advised you by letter to proceed now with the construction of the surgical facilities and put plans in final shape preparatory to a request for bids. It would appear that the differences that we have had on the dental building are within a matter of days of resolution. The general office building is under review now for certain information that they asked us for, and if our understanding is correct, we think we will be able to go ahead with the final plans on this building. I believe that these differences are at least nearing resolution, and in the case of the surgical facility, we have a resolution.

Senator HILL. Those funds were appropriated in 1956, available on July 1, 1956. They have been available for 2 years for construction, for building the urgently needed surgical building. Yet there has been no contract let, the plans have not even finally been approved, have they?

Mr. KELLY. That is right. The architect is now proceeding with the final plans and specifications.

Senator HILL. How long do you think it will be before those plans are ready?

Mr. KELLY. It will be about 5 months before we are ready to let the contract.

Senator HILL. It will be another half year. That will be two and a half years after the money is made available to you for construction before you are even ready to let a contract for construction.

What about your plans for a dental research building?

Mr. KELLY. The tentative plans were completed and submitted to the Budget Bureau and there were differences on them which I say we have just about resolved now, and I think the architect will be authorized this week to go ahead with the final plans.

Senator HILL. How long do you think it will be before you have your final plants, General Burney? Dr. Shannon, of course, will be with us when we have the National Institutes of Health. I can wait and ask him when he is here.

I wondered if you had any comment to make or light to throw on this matter or had anything to say.

Dr. BURNEY. I would say that we share with you the concern over difficulties that have accrued in the development of getting approval of the plans. Perhaps Dr. Shannon would be able to go into more detail relative to what those difficulties have been if you desire to have that information.

FUNDS FOR NATIONAL INSTITUTES OF HEALTH

Senator HILL. We will get that information.

I noticed on the National Institutes of Health that the House committee, in its report, made this statement:

For the last several years Congress has consistently supported the National Institutes of Health at a level that provided for orderly expansion of the programs of research in the major diseases of mankind. The committee could not in good conscience accept, as being even near to adequate, the budget submitted by the administration. That budget not only represented lack of progress, it represented a backward step.

Then the House added some additional funds.

Do you have anything to say about that, Doctor?

Dr. BURNEY. We submitted a slightly larger budget to the Department to maintain some of the progress that has been made.

As I recall, the Department in general approved those but I think in view of the fiscal needs of the total government, it was considered that we should hold our program to the present level particularly in view of some of the rather large increases over the past 2 years. That was the reasoning back of that.

Senator HILL. As you know, and I was glad to see it, the budget made recommendations of larger increases in funds for the National Science Foundation but, on the other hand, reduced your funds.

Dr. BURNEY. Yes, sir. I might say that I supported the request of the National Institutes of Health for its additional funds when that came in but I must also recognize the consideration of our request with those of the total Federal Government, that there are certain fiscal policies that have to be observed.

Senator HILL. Do you have any questions, Senator Thye?

Senator THYE. I have no questions.

Senator HILL. Senator Ives, do you have questions?

Senator IVES. I have no questions.

Senator HILL. Senator Ives called me this morning to explain that he had to be at another very important committee meeting but would get here as soon as he could. I am delighted that he has come.

I am sure you will find this statement of Dr. Burney very interesting, Senator.

Senator IVES. I will go over it.

Senator HILL. Doctor, unless you have something else to add, I want to thank you.

Dr. BURNEY. No, sir; I apologize for such a long statement.

Senator HILL. I want to say that it was a most beneficial statement, and I think it is entirely right that you should make this statement at the opening of these hearings on all the funds for the Public Health Service.

As I said, it is both an excellent and a most gratifying statement. We appreciate it very much.

Dr. BURNEY. Thank you.

STATEMENT BY SENATOR BENNETT

Senator HILL. I have a statement sent to me by Senator Bennett, of Utah, who had hoped to be present this morning and make his statement in person, but he was unable to get away from another meeting. His statement will be printed in full.

(The statement referred to follows:)

STATEMENT BY SENATOR WALLACE F. BENNETT ON APPROPRIATIONS FOR LABOR—HEALTH, EDUCATION, AND WELFARE

I feel very strongly about the importance of the work of the Department of Health, Education, and Welfare, and welcome the opportunity to appear before this committee on behalf of its budget.

Benefits from expenditures in the areas of health, education, and economic security have long since proved their worth, as members of this committee so well know. These are not matters to be considered lightly, for they affect directly or indirectly the well-being of every man, woman, and child in America.

We are facing new frontiers in education, and assistance now will strengthen our national security and benefit every individual young person in school. We are on the threshold of new discoveries in the field of health research that will bring blessings to all mankind.

The House committee, I think, took a very forward moving step in recommending certain increases in the Department's budget, and I hope that your committee will retain them.

As you know, the House committee recommended for the National Institutes of Health an increase of $8,200,000 over their request, but denied the request for authorization to pay full indirect costs of research projects under Federal grants. This $8,200,000 would be, I understand, just about the amount needed to pay our medical schools and universities the overhead costs of their research projects, and I would like to urge that your committee retain this increase and permit the Institutes to use the money in this constructive way.

As things stand, only 15 percent of a research grant can be used for overhead expenses, whereas the actual costs run considerably higher. This has been a great deterrent to the effective support of health research. It has meant that already hard-pressed medical schools and universities, in order to accept research grants, have to dip into their own limited funds to help pay a part of the costs of medical research supported through Federal grants. These institutions have a teaching job to do, as well as research, and this limitation hinders both efforts. In my own State the universities are enjoying a great deal of success in their medical and scientific research programs. Despite their success and their willingness to carry on these projects, I know it has involved considerable financial sacrifice on their part.

While the problem has been under consideration for some time, it has assumed significant proportions over the past 2 years as a result of nearly a threefold increase in funds for research projects.

The National Science Foundation has recommended that all Federal agencies that grant funds for research projects pay the full indirect costs, as the military are now permitted to do. I concur in this view, and earnestly urge you committee to permit the National Institutes of Health to use increased funds recommended by the House in this beneficial way.

I am concerned about some of the cuts that the House committee recommended in the Department's budget. Now, while they do not involve a great deal of money, the work in progress that the reductions would curtail is of real significance to the American people. I hope that your committee will take favorable action on the items that the Department is appealing, so that important work that would otherwise have to be curtailed can go forward.

The $100,000 which the Department requests be restored for salaries and expenses of the Office of Education should be recommended, in my opinion. While this is a relatively small sum of money, it is of far-reaching importance in the Nation's efforts to strengthen our educational system. Without this money new projects directed toward strengthening our colleges and universities will have to be curtailed or postponed. Principally concerned with carrying out the recommendations of the President's Committee on Education Beyond the High School, they are directed toward such matters as planning ways to increase the

supply of qualified college teachers. A nationwide survey of the status and needs of physical facilities in our colleges and universities is proposed. The results of this study, urgently needed for planning purposes, simply would not be in on time.

Regarding our elementary schools, this reduction would result in continuous delay in compiling information at a time when current data are essential. It would prevent a much needed study related to pupil transportation involving over 11 million children, and on which the States now spend approximately $400 million every year.

The reduction would retard the progress of a study of education in Communist-dominated countries, and limit already planned exchange visits by educational leaders in this country and Russia. In view of our need for more complete understanding of the force we are up against, I believe the committee will agree that this Nation can afford $12,000 for these purposes.

The Department's request for restoration of $574,000 in the Public Health Service appropriation for general assistance to States also should be granted. Lack of these funds would slow down health programs which the States are now beginning in such important fields as accident prevention, aging, chronic disease, and radiological health. One important aspect regarding the withdrawal of these funds—actually less than $400,000,000—is that the States need to know what they can depend on in making their own plans. If they get money one year, and not the next, it is bound to be confusing. Naturally, in spite of their obvious value, doubt would be cast as to just how much importance the Federal Government attaches to such State effort.

It seems to me inconsistent to have the Public Health Service persuade the States to undertake new health programs this year, and then precipitously withdraw the Federal support that helped get them underway.

This reduction would also necessitate a postponement of planned expansion of a number of the Public Health Service's most promising pilot demonstrations of community techniques for providing services for the aged and chronically ill.

I understand that a number of promising pilot projects now underway would be greatly limited. A day-care center for the aged is in Indianapolis and joint counseling and activity centers for older people are now under study in Seattle. Methods of providing nutritional requirements of older people are being studied in Columbus, Ohio. Clinic services are maintained for the older people of seven counties in Kentucky.

We now have more than 14¾ million people in our population age 65 and over, and by 1975 this number will have jumped to more than 20½ million. It seems to me very shortsighted to abandon or neglect in any way efforts to serve this increasingly important segment of the American population.

Another recommended cut of $90,000 in Public Health Service sanitary engineering activities would seriously retard promising research phases of the water supply and water pollution control program. Among other water study projects which would be affected, is one dealing with the development of reliable and reasonably rapid means of identifying and appraising the effects of polluting substances occurring in drinking water. I hope that your committee will restore these funds. Our water needs and our pollution problems are increasing at an alarming rate. For domestic purposes alone, Americans use 150 gallons of water per person every day—and for all purposes, our rate of water consumption is 1,200 gallons per person per day. And yet our water supplies are no greater now than they were when our country was young and sparsely settled. Since we can get the water we need only by using the same supply over and over again, I feel very surely that no hindrance should be put in the way of research directed toward assuring clean water.

I think these programs are important and necessary. Thank you for letting me express my views on them.

Assistance to States, General

STATEMENT OF DR. DAVID E. PRICE, CHIEF, BUREAU OF STATE SERVICES; ACCOMPANIED BY DR. JAMES K. SHAFER, CHIEF, DIVISION OF GENERAL HEALTH SERVICES; DR. ALBERT L. CHAPMAN, CHIEF, DIVISION OF SPECIAL HEALTH SERVICES; AND JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

Assistance to States, general

[Assistance to States, general:] To carry out the purposes not otherwise specially provided for, of section 314 (c) of the Act; to provide consultative services of States pursuant to section 311 of the Act: to make field investigations and demonstrations pursuant to section 301 of the Act; to provide for collecting and compiling mortality, morbidity, and vital statistics; to provide traineeships pursuant to section 306 of the Act: and not to exceed $1,000 for entertainment of officials of other countries when specifically authorized by the Surgeon General; [$22,592,000] *$22,889,000.*

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate	$22,592,000	$22,889,000	$22,000,000
Reduction: Reserve for savings	−20,000		
Total obligations	22,572,000	22,889,000	22,000,000

Obligations by activities

	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
Activities:						
1. Grants:						
(a) To States for general health		$15,000,000		$15,000,000		$14,500,000
(b) For public health training		2,000,000		2,000,000		2,000,000
2. Direct operations:						
(a) Technical assistance to States	229	1,769,400	276	2,084,400	229	1,769,400
(b) Vital statistics	200	1,513,400	200	1,513,400	200	1,513,400
(c) International health activities	20	137,000	20	137,000	20	137,000
(d) Special health services:						
(1) Health of the aged and chronic disease	112	1,017,700	112	1,091,700	112	1,017,700
(2) Occupational health	82	675,500	82	675,500	82	675,500
(3) Accident prevention	28	351,000	28	279,000	28	279,000
(e) Administration	11	108,000	11	108,000	11	108,000
Total obligations	682	22,572,000	729	22,889,000	682	22,000,000

Obligations by objects

	1958 appropriation	1959 budget estimate	1959 House allowance
Total number of permanent positions	682	729	682
Full-time equivalent of all other positions	23	26	19
Average number of all employees	645	695	653
Number of employees at end of year	761	760	714
01 Personal services	$4,020,300	$4,325,900	$4,073,200
02 Travel	346,300	373,800	341,300
03 Transportation of things	30,100	37,500	26,600
04 Communication services	143,100	145,700	143,100
05 Rents and utility services	125,000	126,000	125,000
06 Printing and reproduction	95,900	90,900	85,900
07 Other contractual services	322,700	272,300	215,700
Services performed by other agencies	24,900	24,900	24,900
Purchase of vital records transcripts	150,000	150,000	150,000
08 Supplies and materials	81,400	89,500	79,600
09 Equipment	46,700	46,000	42,000
11 Grants, subsidies, and contributions	17,000,000	17,000,000	16,500,000
Contribution to retirement fund	168,000	187,500	175,500
13 Refunds, awards, and indemnities	200	200	200
15 Taxes and assessments	17,400	18,800	17,000
Total obligations	22,572,000	22,889,000	22,000,000

Summary of changes

	Positions	Amount
1958 actual appropriation	682	$22,592,000
Deduct nonrecurring costs:		
1958 accident prevention program		72,000
Reserve for savings		20,000
1959 base	682	22,500,000
1959 appropriation request	729	22,889,000
Net change requested	+47	+389,000

	1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount
Decreases:				
Reduction in 01 and miscellaneous objects to absorb cost of annualization of retirement contributions		$4,400		$4,400
Program decreases:				
General health grants		0		500,000
Chronically ill and aged—reduction in temporary employees (01) and other objects affecting projects such as demonstrations in geriatric health maintenance and community coordination of services		0		74,000
Total decrease		4,400		578,400
Increases:				
For mandatory items:				
Retirement contributions annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)		4,400		4,400
Annualization of retirement costs for 23 additional positions authorized in 1958 for health of the aged and chronic disease		3,100		3,100
Annualization costs for 23 additional positions authorized in 1958 for health of the aged and chronic disease		70,900		70,900
Subtotal		78,400		78,400
For program items: Civil defense	47	315,000	0	0
Total increase	47	393,400	0	78,400
Net change requested	+47	+389,000	0	−500,000

Effect of House Action

ACTIVITY NO. 1: GRANTS

(a) Grants to States for general health

The House reduction of $500,000 in general health grants will have two especially serious effects:

1. It will curtail the programs which States are beginning to initiate and expand in such important fields as chronic disease, aging, accident prevention, radiological health, and development of better local health services; and
2. Undermine the confidence which States and local governments need in the continuity of Federal grant assistance to carry forward programs initiated under the stimulation of Federal grants.

ACTIVITY NO. 2: DIRECT OPERATIONS

(a) Technical assistance to States

The House reduction of $315,000 requested for civil defense programs will:

1. Eliminate the provisions of consultative services to States and Territories.
2. Eliminate training in the public health aspects of civil defense.

(d) Special health services

1. *Health of the aged and chronic disease.*—A reduction of $74,000 in this program is necessary as a result of House action and will cause a reduction in the number of temporary employees, and contracts affecting projects such as demonstrations in geriatric health maintenance, joint counseling and activity centers for older people, and community coordination of services for chronically ill and aged.

New positions requested, fiscal year 1959

Technical assistance to States	Grade	Annual salary
Public health program specialist	GS-14	$10,320
Public health program specialist (6)	GS-13	53,940
Scientist (2)	GS-13	17,980
Scientist	GS-12	7,570
Do	GS-9	5,440
Clerical assistant	GS-6	4,080
Clerical assistant (3)	GS-5	11,010
Laboratory technician (3)	GS-5	11,010
Clerical assistant (10)	GS-4	34,150
Clerical assistant (2)	GS-3	6,350
Laboratory assistant	GS-3	3,175
Director grade (4)		45,114
Senior grade (3)		24,507
Full grade		7,159
Senior assistant grade (8)		53,384
Total positions and annual salaries (47)		295,189
Deduct lapses		72,039
Net cost		223,150

Allocations of grant-in-aid funds for general health

State or Territory	1958 appropriation	1959 President's budget	1959 House action
Total	$15,000,000	$15,000,000	$14,500,000
Alabama	414,200	404,800	391,300
Arizona	121,000	124,700	120,600
Arkansas	273,600	263,800	255,000
California	861,700	873,400	844,300
Colorado	157,000	159,400	154,100
Connecticut	131,400	129,400	125,100
Delaware	26,200	27,300	26,400
District of Columbia	52,300	50,500	48,800
Florida	349,700	366,100	353,900
Georgia	426,000	423,000	408,900
Idaho	87,900	86,900	84,000
Illinois	609,700	613,400	593,000
Indiana	341,000	346,300	334,700
Iowa	246,500	256,700	248,100
Kansas	206,400	206,200	199,400
Kentucky	356,700	352,300	340,600
Louisiana	335,600	333,700	322,600
Maine	108,500	110,400	106,700
Maryland	204,200	206,800	200,000
Massachusetts	339,700	337,100	325,800
Michigan	520,200	532,400	514,700
Minnesota	291,700	297,500	287,600
Mississippi	353,600	354,900	343,000
Missouri	357,000	352,100	340,300
Montana	79,100	79,800	77,200
Nebraska	152,100	154,300	149,100
Nevada	44,400	43,500	42,000
New Hampshire	59,200	59,800	57,800
New Jersey	343,200	349,000	337,300
New Mexico	111,300	109,900	106,200
New York	1,048,000	1,007,500	973,900
North Carolina	529,200	526,400	508,900
North Dakota	101,200	98,300	95,100
Ohio	637,500	636,700	615,500
Oklahoma	237,400	238,100	230,200
Oregon	161,500	163,500	158,000
Pennsylvania	830,000	825,300	797,800
Rhode Island	61,500	63,800	61,700
South Carolina	305,700	307,300	297,100
South Dakota	102,800	103,300	99,800
Tennessee	413,100	402,700	389,300
Texas	817,500	823,300	795,900
Utah	103,900	105,000	101,500
Vermont	52,100	53,000	51,200
Virginia	348,500	354,600	342,700
Washington	206,700	210,600	203,600
West Virginia	225,700	222,300	214,900
Wisconsin	307,400	315,400	304,900
Wyoming	54,000	52,000	50,200
Alaska	63,200	59,900	57,900
Hawaii	53,000	55,100	53,200
Puerto Rico	362,100	353,000	341,200
Virgin Islands	7,500	7,700	7,500
Guam	9,400	9,800	9,500

PREPARED STATEMENT

Senator HILL. Dr. David E. Price, Chief, Bureau of State Services. Do you have a statement?

Dr. PRICE. I have a statement which I would like to submit for the record.

Senator HILL. We will have that go into the record in full and then have you make any comments you wish, sir.

(The statement referred to follows:)

STATEMENT OF CHIEF, BUREAU OF STATE SERVICES

Mr. Chairman and members of the committee, I am Dr. David E. Price, Chief of the Bureau of State Services. The appropriation entitled "Assistance to States, General" is one of a series which supports that part of the Federal public health effort carried out through the Bureau of State Services of the Public

Health Service. Since this is my first appearance before your committee as Chief of the Bureau of State Services, I want to say a few words about the total program of this bureau before I speak about the appropriation, "Assistance to States, General." In reading through the committee's hearings of the past year, I note that the former surgeon general once described the activities of this bureau as the "public health part of the Public Health Service." That is a good description. The mission of the Bureau of State Services is to facilitate application of the latest and most effective measures for the promotion of good health and the prevention and control of diseases. For the most part, this mission is carried out through assisting State and local public health agencies.

Surgeon General Burney has already summarized for you the current status of our national health. Encouraging as this report is, we deplore the slow and imperfect application of much already available knowledge that could lighten the burden of disease. The application of this knowledge could do much to cope with the health implications of the rapid changes we are experiencing: changes in age of our population, changes in the chemical constituents of every part of our environment, changes in radiation levels to which all are exposed, changes in community organization through which services are maintained.

APPLICATION OF KNOWLEDGE

That some important knowledge is not widely applied is apparent to any thoughtful person.

Despite the proven effectiveness of Salk vaccine against paralytic polio, there remain in this country many millions of people under 40 who have not yet been vaccinated. We are continuing, therefore, a campaign in cooperation with the National Foundation for Infantile Paralysis, the American Medical Association, and the National Advertising Council to urge these people to take advantage of this health protection.

Much more could be done across the Nation to provide early rehabilitative care of "stroke" patients. Many adults at the peak of their contribution to society are permanently disabled by strokes. Many of these could be restored to productive work and others to the independence of self-care.

Glaucoma, a principal cause of blindness and especially important among older people, can be detected by a simple test. We have reason to believe that broad-scale application of this test will prevent much of the blindness resulting from glaucoma through warning people to have treatment before irreparable damage is done.

There are even preventive measures to be applied to some of the newer public health problems. The great increase in use of radiation sources with the advent of atomic energy has brought new significance to the older, machine-made X-rays, and demands that every opportunity be sought to minimize exposure.

Techniques are available by which radiation exposure in the healing arts and in industrial practice may be materially reduced without decreasing the diagnostic benefits. In many instances these techniques are not being applied. Few States are now prepared to promote vigorous programs for radiological protection, notwithstanding the new significance of machine-made X-rays which, even in this atomic age, are still the major source of exposure for the average person.

In several pilot studies, deaths from home accidents have been decreased by intensive community home safety campaigns. However, only a few health departments have undertaken such campaigns.

These are but a few examples of preventive measures which are not fully being put to work to reduce death and disability. It is our job to see that such measures and techniques as these are put to work for the people of our Nation through the health agencies that serve them.

There is also the need for new knowledge to apply, and for new and more effective ways to apply it. Research programs of the Service, carried out largely by the National Institutes of Health, our sister bureau, are supplemented by our own work which is directed to the development or refinement of techniques which can economically put new knowledge into practical application at the community level.

There are two principal means by which the Federal Government encourages the States to employ the latest and best techniques: financial assistance and technical assistance.

GRANTS-IN-AID

Financial assistance is administered by the Public Health Service through grants-in-aid which have the dual objective of stimulating the introduction of

new techniques and sharing the cost of maintaining effective public health work at State and local levels. These funds encourage and help States enter new fields of service, extend their programs to a larger number of their citizens, and improve the professional quality of their health practices.

Use of funds for these purposes is illustrated by the $3 million increase in this appropriation, "Assistance to States, General," in fiscal year 1958. Acting upon the suggestions made in the report of your committee and that of the Senate on the 1958 appropriation, the Public Health Service, and the Surgeon General personally, made a vigorous effort to stimulate use of these funds, insofar as possible, to cope with chronic diseases and to develop health services for the aged.

We have been gratified with the significant program advances in State and local public-health programs which these additional funds have made possible. State and local health officers throughout the country are using these funds to initiate new programs and to expand and improve existing programs in the field of chronic disease and health of the aging. The States have also used these increased funds to initiate home nursing services, to establish accident-prevention programs, to develop radiological health services, to provide new and more modern laboratory diagnostic services, to establish new local health units, and to staff more adequately existing local health units and central planning offices.

Notwithstanding the importance of the stimulatory role of grants, it is quite important that the financial-support aspect of the disease-control grants not be overlooked. The Federal Government has long acknowledged a responsibility stemming from its control over interstate commerce to deal with disease problems which simply do not respect State boundaries. There is also a strong Federal interest in the health and productivity of the Nation's citizens, particularly as these bear on national and civil defense. Therefore, these grants represent the Federal share in a Federal-State-local public-health partnership.

TECHNICAL ASSISTANCE

The second means by which we carry out our function is technical assistance. This is the name we apply to a group of activities that are represented in all Bureau of State Services programs. It includes:

1. Operational or applied research to develop or refine new and improved tools for use by State and local health agencies.
2. Demonstrations to "sell" the new tool.
3. Training to help key State and local personnel learn the use of this new tool.
4. Consultation, expert advice, and assistance furnished by the Public Health Service.

RESEARCH

Thus, among our research activities, Bureau of State Services scientists at the Communicable Disease Center are working on the perfection of the fluorescent antibody technique—a new method of diagnosis which permits the identification of certain diseases more accurately and quickly than ever before.

In dealing with the venereal-disease problem, there is a constant need for better tools and methods to advance control efforts. Last year they developed the rapid plasma reagin test, nicknamed "RPR," which requires only 20 minutes to complete, thereby permitting immediate diagnosis and treatment of identified cases. This has been particularly useful in the rapid screening for venereal diseases in large groups, such as the migratory workers entering the United States from the Mexican border. They are now working on a new test, the Reiter protein antigen, which promises to be more effective for general utilization from the standpoint of both accuracy and cost than any which has been heretofore available.

The growing threat to the quality of our water resources from municipal and industrial contamination is receiving continuous attention in basic studies at the Sanitary Engineering Center and in field studies undertaken cooperatively with the States. One such field study deals with the determination of the causes of increasing difficulties in purifying Lake Michigan waters for public water-supply use and the demonstration of measures for alleviating the condition.

DEMONSTRATIONS

The second characteristic element of our technical assistance is the demonstration. Unfortunately, new health measures don't sell themselves without advertising any better than do new models of automobiles or refrigerators.

Therefore, we have to get out and push and stimulate to get these new measures put into action. Thus, in 1959, we will be conducting demonstration programs in glaucoma and diabetes detection, the control of insect carriers of disease, the development and operation of a model program for local health departments in the management of tuberculosis patients outside of the hospital. In the field of health of the aged, we will demonstrate programs aimed at the promotion of modern care techniques and improved standards of care in nursing homes. We will demonstrate radiological health programs which will show how exposure to X-rays in the healing arts and in industrial activities can be cut down without sacrificing any of the desired results. These are but a few examples of the many demonstration-type projects to be undertaken by the Bureau of State Services program in 1959.

In the field of air pollution, we shall demonstrate how this problem can be assessed statewide and how technical services on a State level can be effectively used to complement local control activities. Among the locations where such studies are planned are California, Illinois, Indiana, New York, New Jersey, North Carolina, and Texas.

TRAINING

The effective operation of the modern health department requires personnel representing broad backgrounds of knowledge and varying degrees of specialization. Rapid changes and advances in scientific knowledge and the high turnover rate of public-health personnel have operated to set up a continuing need for short-term training courses for State and local personnel. Many of these courses are so-called refresher courses for those who have had the basic academic training in their specialty. All stress the latest scientific developments and newest techniques. We do not seek to train all the people in State and local health departments that need it, but, rather, design our courses primarily for key State and local people so that they may use the information to train others through their own training programs. We also put emphasis on helping the State health agencies develop and improve their own in-service training activities.

Our principal training sites are the Communicable Disease Center and the Sanitary Engineering Center, but in some instances these courses are being put on the road and taken out to the field where people can receive their benefits with minimum disruption of their regular duties.

TRAINEESHIP PROGRAMS

There is also an urgent need for people with more academic training—a different kind of training than can be given in short courses such as these. To increase the number of trained personnel available for public-health work and to improve the scope and quality of public-health service in the United States, Congress, in 1956, enacted a program of traineeship awards for graduate or specialized public-health training for physicians, nurses, sanitary engineers, dentists, health educators, and other specialty categories of personnel. The response to the program and its success in providing training have been gratifying. So far in 1958, traineeships have been awarded to 521 individuals. Applications were received from approximately twice that number of qualified applicants. Not only has this program been successful in providing graduate training necessary for modern public-health operations, but it has also been successful in stimulating the recruitment of new personnel into the field of public health. Approximately one-half of the individuals to whom traineeships have been awarded during the last 2 years had never worked in public health before. Another approximately 30 percent of the trainees had been employed in public health for less than 2 years. This important program will be continued on the same level in 1959.

CONSULTATION

After having produced better public health tools through research, demonstrated their effectiveness by application in some operating health agencies, and set up training programs to familiarize more personnel with their use, the last phase of technical assistance is consultation. This rounds out the Service role of leadership in public-health matters. The Public Health Service needs a full complement of experts in all the specialties in the public health field because it is impossible and unnecessary for every State health agency to be so staffed. The Bureau of State Services uses these experts to provide advice, assistance, and

stimulation through our major field stations such as the Communicable Disease Center and the Sanitary Engineering Center. An extension of the consultation technique that has proven invaluable in stimulating and developing improved State and local health programs is the short-term assignment of technical specialists to States. This method is very effective in new program areas where initial work by loaned personnel pays off in terms of a strong and continuing State program. It was in this manner that venereal disease programs in many States were developed years ago. Today, comparably excellent results in starting heart disease control programs are being achieved through the assignment of medical officers to a number of States. I stress the characteristic short term because it is important in these assignments that we extend our Federal personnel resources to the maximum number of States and confine our efforts to getting good programs operating under State direction as quickly as possible.

All of these various consultative methods are aimed at the objective of helping the health agencies of the country to do their job so that the people of our country can have better health protection and better sanitation.

APPROPRIATIONS

This pattern of applied research, demonstration, training and consultation you will find running through every program of the Bureau of State Services provided for in the following appropriations:

1. Assistance to States, general
2. Grants and special studies, Territory of Alaska
3. Control of venereal diseases
4. Control of tuberculosis
5. Communicable disease activities
6. Sanitary engineering activities

In addition, funds for the heart disease control, dental public health, and cancer control activities carried on through the Bureau of State Services are provided in the appropriations for those Institutes.

Reference to the Institutes brings to mind the wonderful strides that have been made in the basic medical research field during the past few years. We believe that this progress should be complemented with a vigorous effort to insure maximum application of the health measures that our Nation's research genius produces. And that is what these Bureau of State Services' programs aim to do.

ASSISTANCE TO STATES, GENERAL

The appropriation "Assistance to States, general" contains funds for a number of public health programs required to maintain, extend, and improve preventive health services in the United States. It is the keystone of the Federal public health effort. Included in this appropriation are funds to provide for:

- The general health grant.
- The public health traineeship program.
- Technical assistance to States.
- The National Office of Vital Statistics.
- International health activities.
- Certain special health programs, including those for—
  - The health of the aged and chronic disease.
  - Occupational health.
  - Accident prevention.

These activities constitute a balanced program of financial and technical assistance, of program maintenance and development, and of program research and operation.

The budget included a request for $315,000 for civil defense programs, which we are no longer requesting be included in this appropriation.

The general health grant provides funds to carry out the Federal responsibility for sustaining and improving preventive health services in the United States and for developing and initiating new public health programs to meet emerging health problems and put into community practice new gains in scientific knowledge.

These Federal grant-in-aid funds, in conjunction with State and local appropriations, are being used to finance many essential community health services. I have mentioned the use of these funds in 1958 in the extension and improvement of programs in the field of chronic disease control and health services for the aged. In addition, these funds provide for:

1. Support for existing local health units and establishment of new units in areas where no organized full-time preventive health services exist.

2. Communicable disease control services, including immunization programs, epidemiology services, and laboratory diagnostic services.

3. Public health nursing services to assist families in their homes, to practice good health protection and, as necessary, to provide home nursing care for those who are sick.

4. Environmental sanitation services to protect the public from disease through programs to insure safe water and milk supplies, proper restaurant and food sanitation, and safe and adequate sewage-disposal methods.

5. Accident prevention programs to reduce the toll of death and disability resulting from home, farm, and highway accidents.

6. Occupational health services to protect workers in industrial plants from the health hazards associated with their working environment and the increasing variety of substances and compounds to which they are exposed in modern industrial production.

Funds are requested for the general health grant in fiscal year 1959 at the same level as in 1958 in order to preserve the gains already made and to enable the States and communities to incorporate these new programs more firmly into the structure of their public health operations.

In addition to the basic technical assistance activities previously mentioned, this appropriation includes funds for research in public health practice. It is extremely important that public health practices be studied in the community with the same scientific thoroughness and precision that we devote to other subjects in the research laboratory. We expect to be able thus to reevaluate the traditional concepts of public health practice and to develop new practices which are more responsive to modern health needs, community organization, and scientific knowledge.

These funds are also used to support program coordination and studies of health services for agricultural migrant workers. A study, for example, is now underway in cooperation with the States of Texas and Michigan to identify and evaluate the health services which a group of migrant workers and their families receive as they move north. From this study, which will continue into next fiscal year, we hope to develop data which will be useful to other States, as well as Texas and Michigan, in providing more adequate health services to similar groups of migrant workers.

In addition to these activities, the "Assistance to States, general" appropriation also provides for the special program effort in three great problem areas: Health of the aging including chronic disease, accident prevention, and occupational health.

There is hardly a segment of our population that escapes the ravages of chronic illness. Over one-half of the chronically ill in the United States are under 45 years of age; more than three-fourths are between 15 and 64 years old. In the ages over 10, more than 60 percent of the days of disability suffered are due to chronic disease and this proportion rises with increasing age.

It is obvious, therefore, that chronic illness and health problems of the aging are among the most serious that we have to face now, and for many years to come. In carrying out the Public Health Service responsibility for providing consultation and technical assistance in this field, we are endeavoring to apply the existing knowledge and techniques as rapidly as our resources will permit.

Any comprehensive health program must include provision for reducing deaths and disabilities from accidents. The fact that accidents are killing over 90,000 people a year is well known. Only recently, however, have we had an estimate of the extent of injuries which was based on current data. A sample from the national health survey revealed that during the 3-month period—July through September 1957—approximately 14 million people suffered accidental injuries for which they sought medical care or were incapacitated at least for 1 day or more. Based on these preliminary data, it appears that possibly upward of 50 million Americans are so injured during the course of a year. This threat to our health from accidents must be relieved and the economic burden of accidents upon the individual and the community must be reduced. This can be accomplished because most accidents are preventable and because practical, preventive programs established at the State and community level can be effective.

Illness in the Nation's work force of more than 52 million industrial workers accounts for an estimated loss of 500 million man-days in production and $6 billion in wages and salaries.

Our occupational health program, carrying out the principal Federal effort to promote health protection of workers, attempts to reduce this tremendous loss through field studies of occupational diseases, consultation to States and industries, training, and the promotion of privately financed employee health services.

These are all extremely important activities, all aimed at application of methods and programs which can prevent and reduce disease and disability. They are budgeted for at about the same level of operation as in 1958. We shall be very glad to discuss any of the programs covered by this appropriation in further detail. Dr. James Shafer is with me to deal with the general grants and technical assistance activities and Dr. Albert Chapman can answer questions regarding the special health activities of health of the aged, chronic disease, occupational health, and accident prevention. I appreciate the opportunity of presenting our program to you.

EFFECT OF HOUSE ACTION

The reduction of $889,000 will cause a reduction of $500,000 in grants to States for general health, elimination of the civil defense program, and a reduction of $74,000 in the health of the aged and chronic disease program. With regard to general health grants, the House action will curtail the programs which States are beginning to initiate and expand in the fields of chronic disease, aging, accident prevention, and radiological health, thus undermining the confidence which States and local governments need in the continuity of Federal grant assistance. The decrease in the health of the aged and chronic disease program will reduce funds for contracts affecting projects such as demonstrations in geriatric health maintenance and joint counseling and activity centers for older people. It is urgently requested that $500,000 be restored to the budget for general health grants and $74,000 for work with the aged and chronically ill.

The House disallowed $315,000 for civil defense activities, which we are no longer requesting be included in this appropriation. It is our understanding that the Administrator of Civil Defense will request the Independent Offices Subcommittee to include funds in the Federal civil defense appropriation for allocation to the agencies to whom certain civil defense functions have been delegated.

We are at your service for any questions you may have regarding these programs.

GENERAL STATEMENT

Dr. PRICE. In view of the excellent way in which Surgeon General Burney covered the interests of our Bureau's programs I think I can make my statement quite brief.

The appropriation which we are about to consider entitled "Assistance to States, General," is one of a series of appropriations that supports the part of the Federal public health effort carried out through the Bureau of State Services.

As Dr. Burney pointed out, we feel that we have made good progress generally but we are dissatisfied that there has been slow and imperfect application of much already available knowledge that could lighten the burden of disease. He gave you a number of examples of programs which we feel can be promoted to greater benefit; such things as the vaccination programs; the fight against glaucoma which is an important cause of blindness; an attempt to deal with home accidents which account for a great deal of disability; the pollution of the environment; and unnecessary exposure to radiation.

One of the very important tasks of this Bureau is to attempt to translate the result of research work into practical programs that can be carried out at a community level.

In addition to this translation of research results, however, there is need for new knowledge to apply and for new and effective ways to use it.

The research programs of the Public Health Service which are carried out so largely in the National Institutes of Health are supple-

mented by our Bureau's work which is directed to the development or refinement of techniques which can economically put new knowledge into practical application at the community level.

MEANS OF ENCOURAGEMENT TO STATES

There are two principal means by which the Federal Government encourages States to employ the latest and best techniques. The first of these is financial assistance.

The second is technical assistance.

Financial assistance is administered by the Public Health Service through grants-in-aid which have the dual purpose of: first, stimulating the introduction of new activities and techniques into public health practice and second, of sharing the cost of maintaining effective public health at State and local levels.

We have been very gratified, as Dr. Burney said, with the effects of the $3 million increase in the appropriation "Assistance to States, general," which Congress provided for fiscal year 1958.

We feel that this has achieved significant effects already in expanding and improving programs in chronic diseases and the health of our aging population.

The second means by which we carry out these functions is technical assistance. This is the name that we in the Public Health Service give to a group of activities running through every one of our Bureau of State Services programs. It includes the kind of research which we do, the demonstrations in which we attempt to show the feasibility of new public health programs, the training activities by which we try to provide personnel needed to implement these programs and finally, the consultation activities in which we service the programs after they have started to help the States work out any problems that may develop.

OPERATIONS UNDER FUNDS APPROPRIATED

Now, specifically, in relation to this item "Assistance to States, general," this appropriation contains funds for a number of public health activities that are required to maintain, extend, and improve preventive health services in the United States. It is really the foundation of the Federal effort toward adequate public health services because it is the appropriation which most uniquely supports work at the local health unit level.

An important part of this appropriation is the general health grant which provides funds to carry out the Federal responsibility for sustaining and improving the organization and services basic to any effective community effort in public health. These funds, in conjunction with State and local appropriations, are being used for chronic disease control, to deal with the health problems of the aged, communicable disease control, public health nursing, accident prevention, occupational health, and the extension of local health services.

This year the budget request is to hold this general health grant to the same level as in fiscal year 1958 in order to preserve the gains that have been made and to enable States and communities to incorporate these new activities which they have begun, or have planned, more firmly into the structure of their public health operations.

EFFECT OF HOUSE REDUCTION

The reduction of $889,000 effected by the House would cause a reduction of $500,000 in grants to States for general health, elimination of the civil defense program, and a reduction of $74,000 in the health of the aged and chronic disease programs.

With regard to the general health grants, the House action will curtail the programs which States are beginning to initiate and expand in the fields of chronic diseases, aging, accident prevention, and radiological health, thus undermining the confidence which States and local governments need in the continuity of Federal grant assistance.

The decrease in the health of the aged and chronic disease program will reduce funds for contracts affecting programs, such as demonstrations in geriatric health maintenance and joint counseling-activity centers for older people.

It is urgently requested that $500,000 be restored to the budget for the general health grants and $74,000 for work with the aged and chronically ill.

The House disallowed $315,000 for civil defense activities which we are no longer requesting be included in this appropriation, since we understand that the Federal Civil Defense Administrator proposes to introduce a consolidated request for civil defense funds.

In addition to the support of State programs through general grants, this appropriation provides funds for research in public health practice, and for study and coordination of health services for agricultural migrants. It also provides for the special efforts being made by the Bureau of State Services in the great problem areas of health of the aged and chronic disease, occupational health, and accident prevention.

Senator HILL. That was in the $500,000?

Dr. PRICE. No, sir; this was not within the $500,000.

Senator HILL. Did the House allow the funds for that last activity?

Dr. PRICE. Yes, sir, except that $74,000 of the total $889,000 House cut will be taken from this activity.

Mr. Chairman, I have with me here Dr. James Shafer, who is the Chief of our Division of General Health Services, and Dr. Albert Chapman, Chief of the Division of Special Health Services, who are the two program chiefs dealing with the appropriation item.

We would be very pleased to answer any questions which you may have.

Senator HILL. We are happy to have Dr. Shafer and Dr. Chapman here with you, Dr. Price.

CUT IMPAIRS STATE PROGRAMS

It seems to me that one of the most important things is if this $500,000 is not restored, then what you would do is that you would very much disjoint and impair these programs which have been built up on State and Federal funds; is that correct?

Dr. PRICE. That is very correct. I have had an opportunity this past week to talk to several State health officers who have been very much perturbed by the threatened cut as a result of the House action. They tell me that the situation they face is this: They have laid plans to

utilize their share of the additional $3 million for this year to get some new activities started. They are now faced, almost before they have begun, with the possibility of a reduction in those funds for next year. They told me that as a matter of pure practical economics, they were going to have to at least make sure that they spend that money in a way that would not cause them to have commitments with regard to next year's program.

This will quite effectively vitiate the benefits gained by the additional money this year, I believe, sir.

Senator HILL. The $3 million additional this year?

Dr. PRICE. Yes, sir.

Senator HILL. Senator Ives, do you have questions?

Senator IVES. I have no questions.

Senator HILL. Doctor, we thank you, gentlemen, very, very much. Thank you very much for your statement.

FUNDS FOR ACCIDENT PREVENTION

I have a letter from Mr. Barry Griffith King, of Washington, D. C., with respect to funds sought for accident prevention, which I understand amount to $351,000, the sum available in the current year for the purpose. I shall include Mr. King's letter in the record.

(The letter referred to follows:)

WASHINGTON, D. C., *April 17, 1958.*

Hon. LISTER HILL,
Senator from Alabama, Washington, D. C.

DEAR SIR: I am seeking the opportunity to present, as a private citizen, my comments which I believe pertinent to the deliberations of your subcommittee on Health, Education and Welfare appropriations. The comments concern the accident prevention program.

By way of introduction, I should like to state that I am a research physiologist with over 30 years experience in research and teaching. The first accident prevention study I participated in was a determination of the physiological requirements, in terms of time and current, for electric circuit-breaker protective devices. This study started at Columbia University, College of Physicians and Surgeons, in 1928 in collaboration with the Bell Telephone Laboratories. The results which were developed, and which can be presented in a single table or chart, have been used as a guarantitative basis for design of electrical circuit protective devices over these many years. This emphasizes the continuing value which can be derived from sound quantitative results of accident prevention studies. My interest and activity in the accident prevention field has continued to a greater or lesser degree since 1928.

There has been a great increase in emphasis on activities designed to prevent accidental death and injury since the end of World War II. I have served on numerous safety research committees and, with my scientific colleagues, have planned programs and experiments. We have attempted to encourage research investigators in Government and in academic institutions to become interested in and to undertake studies in this problem area. We have presented projects in terms of assignable tasks and have tried to find sponsors in industry or in Government for their accomplishment. A great amount of time and effort has been expended by very large numbers of scientists in this type of committee activity. A large number of the projects which have been developed and proposed are good projects. Only a small percent of the work, however, has been undertaken and accomplishment has been limited accordingly. Time after time, programs which represent the best thinking of competent scientists, as well as many, many man-hours of endeavor have, of necessity, been abandoned and have disappeared in some file. In spite of this, these men have continued to participate in accident prevention committee activities, hoping, perhaps somewhat naively, that some day a plan or program would be carried out.

Accidents have caused staggering losses in time, money and materials, as well as grief for those who have been needlessly killed or injured. In home accidents,

for example, there are between 4 and 5 million injuries per year, and some 28,000 to 30,000 deaths from accidental causes. The victims include many of those in the older age group, who, in probably a significant percentage of cases, have accumulated experience and wisdom which would enable them to continue to perform useful functions even though their physical condition may have deteriorated. The figures also include babies and young children whose potential contributions might well have been great. Motor vehicle accidents provide another example of the seriousness of the problem in today's society. I believe the figures for deaths are between 35,000 and 40,000 per year, with something between 1¼ million and 1½ million injuries. When these cumulative figures are considered as year after year cases are added to the totals, one cannot help but become somewhat emotional about the humanitarian aspects and alarmed at the economic implications.

In view of the seriousness of the problem, we may ask why, then, has the return on the effort of competent scientists and engineers and of safety committees been so small. The answer is quite clear. Proposals, decisions and even the most worthy plans cannot be carried out unless, (1) supported by a competent organization, careful planning and coordination, (2) sufficient funds for administering programs and supporting projects which so effectively serve public welfare, and (3) training young scientists so that our knowledge can be increased and our efforts toward accident prevention constantly improved. Many of us have been sincerely gratified to see the Public Health Service undertake accident program activities and meet the great challenge of today to public health and welfare. It is a new organization insofar as this field is concerned. A competent staff and reasonable support to provide for an orderly growth of the program is unquestionably fully justified. The benefit from the Public Health Service activities will yield important dividends as the result not only of direct application of the findings, but also of stimulation of interest of States, communities and industry in the problem and encouraging their participation in accident prevention.

May I submit to you and members of your committee a request that you will recognize these comments. I hope that you will be encouraged in the support that you are providing to the citizens of the United States through your assessment of their needs in helping to protect them against accidental injury and death.

If at any time I can be of service to you, or your committee, I should be most happy to do so.

Very truly yours,

BARRY GRIFFITH KING, Ph. D.

GRANTS AND SPECIAL STUDIES, TERRITORY OF ALASKA

STATEMENT OF DR. JAMES K. SHAFER, CHIEF, DIVISION OF GENERAL HEALTH SERVICES, ACCOMPANIED BY JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

Grants and Special Studies, Territory of Alaska

[Grants and special studies, Territory of Alaska:] To enable the Surgeon General to conduct, in the Service, and to cooperate with and assist the Territory of Alaska in the conduct of, activities necessary in the investigation, prevention, treatment, and control of diseases, and the establishment and maintenance of health and sanitation services pursuant to and for the purposes specified in sections 301, 311, 314 (without regard to the provisions of subsections (d), (f), (h), and (j) and the limitations set forth in subsection (c) of such section), 361, 363, and 371 of the Act, including the hire, operation, and maintenance of aircraft, and the purchase, erection, and maintenance of portable buildings, $2,165,000.

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate (total obligation)	$2,165,000	$2,165,000	$2,165,000

Obligations by activities

Description	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
Special grants for:						
General health		$638,000		$638,000		$638,000
Mental health		1,000,000		1,000,000		1,000,000
Direct operations:						
Technical assistance	7	60,100	7	60,100	7	60,100
Field and laboratory, investigations	44	411,700	44	411,700	44	411,700
Administration	8	55,200	8	55,200	8	55,200
Total obligations	59	2,165,000	59	2,165,000	59	2,165,000

Obligations by objects

	1958 appropriation	1959 budget estimate	1959 House allowance
Total number of permanent positions	59	59	59
Full-time equivalent of all other positions	1	1	1
Average number of all employees	56	56	56
Number of employees at end of year	58	58	58
01 Personal services	$377,800	$377,300	$377,300
02 Travel	33,700	33,700	33,700
03 Transportation of things	9,500	9,500	9,500
04 Communication services	2,500	2,500	2,500
05 Rents and utility services	40,000	40,000	40,000
06 Printing and reproduction	2,000	2,000	2,000
07 Other contractual services	4,600	4,600	4,600
08 Supplies and materials	36,000	36,000	36,000
09 Equipment	6,000	6,000	6,000
11 Grants, subsidies, and contributions	1,651,000	1,161,500	1,651,500
13 Refunds, awards and indemnities			
15 Taxes and assessments	1,900	1,900	1,900
Total obligations	2,165,000	2,165,000	2,165,000

Summary of changes

	Positions	Amount
1958 actual appropriation	59	$2,165,000
1959 appropriation request	59	2,165,000
Net change requested	0	0

	1959 budget estimate	1959 House allowance
Increases:		
For mandatory items:		
Retirement contributions annualization (rate 6.5 percent in 1959, 6.275 percent in 1958 for base positions)	$500	$500
Decreases:		
Reduction in personal services to absorb cost of annualization, of retirement contributions	500	500
Total change requested	0	0

PREPARED STATEMENT

Senator HILL. Dr. James K. Shafer will take up the grants and special studies, Territory of Alaska.

I believe the House allowed you the budget estimate, did it not?

Dr. SHAFER. It did, sir.

Senator HILL. Do you have a statement you would like to file with us?

Dr. SHAFER. I have a brief formal statement which I would like to file for the record, sir.

Senator HILL. All right, sir.

Do you have any comments to add, sir?

Dr. SHAFER. I would like to make a summary of that statement.

(The statement referred to follows:)

STATEMENT OF CHIEF, DIVISION OF GENERAL HEALTH SERVICES

Mr. Chairman and members of the committee, this appropriation provides funds for the following purposes:

First, funds are provided to continue research investigations seeking fundamental knowledge of conditions affecting life in low temperature areas and solutions to some of the many health problems of Alaska.

Secondly, funds are provided to maintain essential health services.

Thirdly, funds are provided in accordance with one of the provisions of the recently enacted Alaska Mental Health Enabling Act which authorizes the appropriation of funds over a 10-year period to aid the Territory in assuming financial responsibility for an integrated program for the inpatient and outpatient care and treatment of the mentally ill of Alaska.

Each of the above activities is described separately below.

FIELD AND LABORATORY INVESTIGATIONS

The increase in population and industrialization in Alaska, paralleled by a similar expansion in northern Canada and in corresponding Soviet territory, indicates that our civilization is pressing northward into largely undeveloped land areas. This trend is further emphasized by the increasing utilization of these areas for the accumulation of scientific and military data, for air transportation points, and as sources of essential raw materials.

Health problems associated with housing, water supply, waste disposal, and disease control, which are unique to low temperature areas, have prevented the settlement and effective utilization of these areas for centuries. The small staff of researchers at the Arctic Health Research Center has made noteworthy contributions in definition and solution of some of these problems; however, in terms of the problems of life in low temperature areas, our knowledge is still meager.

Our research plan for fiscal year 1959 includes investigations in:

(1) biochemistry and nutrition;
(2) environmental sanitation;
(3) animal-borne diseases;
(4) entomology;
(5) physiology; and
(6) epidemiology.

Illustrative of the type of investigations done by the Arctic Health Research Center are the following studies now underway in environmental sanitation:

(*a*) Community and private water-supply and sewage-disposal problems.

(*b*) Shellfish poisoning.

(*c*) Experimental installation and testing of water-supply and waste-disposal methods and equipment.

(*d*) Experimental design and field testing of housing adapted to the Arctic climate.

GRANTS AND TECHNICAL ASSISTANCE

Funds are made available under this appropriation to assist the Alaska Department of Health in the provision of public-health services to the people of Alaska by means of (1) a special grant to augment Territorial appropriations in the establishment and maintenance of essential health services, and (2) the loan of Public Health Service personnel to the Alaska Department of Health to help administer these services.

The serious health problems in Alaska are accentuated by the mass migration of people to the Territory in recent years. Death and morbidity rates in Alaska from communicable diseases, including pneumonia, diphtheria, scarlet fever, and

whooping cough, reach extremely high levels in terms of their stateside occurrence. Death rates from certain diseases of early infancy in Alaska are over 60 percent higher than in the United States. Although deaths from tuberculosis have been substantially reduced with the application of modern techniques, the tuberculosis death rate is still more than twice that of the United States. The whooping-cough death rate in almost five times as great.

People long isolated from exposure to common communicable diseases are always in danger of spectacular epidemics. One example of this can be seen in the 1957 flu epidemic on St. Paul Island. There were 352 people on the island, of whom 28 were white. Between October 11 and 31, 83 percent of the total population became ill. Eighty-eight percent of the natives became ill, and only 21 percent of the whites. Eleven natives were hospitalized with pneumonia, and two died. In 3 small, isolated villages this year, 71 out of 75 persons became ill with influenza within a few days. One child died. This type of epidemic, involving numerous infectious diseases, is occurring in Alaska with increasing frequency.

Eye, ear, nose, and throat infections are found to be uncommonly prevalent. In a study of 899 persons, diseased tonsils were found in 70 percent of those who still had tonsils; 53 percent showed present or past damage to the tympanic membrane, one-third had impaired hearing, and about 26 percent had corneal scarring.

More preventive health services, such as those provided by public-health physicians and nurses, are required per unit of population in Alaska as compared to the United States. It also costs more to provide service in Alaska. The provision of health services is adversely influenced by the tremendous size and limited financial resources of the Territory, the primitive living conditions of many of its people, and the difficulties encountered in providing housing and heating and in maintaining safe water supplies and efficient waste-disposal systems in an area where Arctic and subarctic temperatures prevail.

The provision of grant funds and the loan of personnel to Alaska have enabled the Alaska Department of Health to broaden the scope of its public-health services to the people of Alaska.

ALASKA MENTAL HEALTH ENABLING ACT PROGRAM GRANT

The Alaska Mental Health Enabling Act, enacted by the 84th Congress, transferred responsibility for the care and treatment of the mentally ill of Alaska from the Department of the Interior to the Territory.

Section 371 of the act authorized the appropriation of $1 million for each of the 2 fiscal years ending June 30, 1958, and June 30, 1959, and for a successive reduction of $200,000 each second year thereafter until the Territory of Alaska assumes full fiscal responsibility after June 30, 1967. One million dollars was appropriated for 1958, and the same amount is requested for 1959. Funds appropriated under this provision of the act are used to assist the Territory in providing an integrated mental-health program, including outpatient and inpatient care and treatment of the Alaskan mentally ill. This appropriation replaced the system of financing the cost of care and treatment of the Alaskan mentally ill by the Federal Government through direct appropriations to the Department of the Interior and the Department of Justice. Another section of this act provides for the construction of mental hospitals in Alaska so that patients will not have to be transported and cared for outside of Alaska.

It is anticipated that the cost of transportation, care, and treatment of Alaskan mentally ill, plus the cost of the preventive mental-health services now offered by the Territory, will exceed the million dollars of Federal funds authorized for 1959. The Territorial government will have to assume this added cost of patient care from its Territorial appropriations, and will have to continue to contract for hospitalization outside of Alaska until inpatient treatment facilities are completed in Alaska.

The total amount of funds requested under this appropriation for fiscal year 1959 is $2,165,000. This amount will permit continuance at the same level of the grants for public-health services and support of mental-health activities authorized by the Alaska Mental Health Enabling Act. It will also provide the same amount of funds as in 1958 for field and laboratory research by the Arctic Health Research Center.

I shall be glad to attempt to answer any questions you may have.

Arctic Health Center

Dr. Shafer. Mr. Chairman and members of the committee, this appropriation provides funds for research necessary to the solution of the health problems in low-temperature areas, funds to assist the Territory to establish and maintain public-health services, and funds to accomplish the transfer of responsibility from the Federal Government to the Territory of Alaska for the development of an integrated mental-health program, including the care and treatment of their mentally ill.

The Arctic Health Research Center has been in operation since 1948, with a small staff and minimal resources. Despite the limited scale of this operation, we have developed a strong nucleus of experienced specialists in research on problems of man's adaptation to the Arctic environment. This dedicated group of scientists, cooperating with other scientists throughout the world, has made significant contributions to America's knowledge and skills in this area of scientific development. Besides the definition and solution of infectious disease and problems connected with Arctic food sources and human adaptation to cold, they are actively and with measurable success striving to devise methods of securing a water supply, disposing of waste, and providing housing to meet the age-old problem of moisture and permafrost in cold climates.

Because of the uniqueness of public health problems in Alaska, the vastness of the land area, limitation of the Territory's tax resources by the Federal Government, and the heavy impact of military and other Federal operations, the Territory cannot finance the entire cost of essential preventive health services. This appropriation provides for the loan of specialized personnel which the Territory cannot recruit, and the grant-in-aid essential for the provision of preventive health services by the Territorial government.

Mental Health Program

This appropriation also provides the $1 million authorized by section 371 of the Alaska Mental Health Enabling Act to assist the Territory to administer an integrated mental health program. Federal assistance will be progressively reduced by $200,000 each biennium, beginning in 1960 until July 1, 1967, when the Territory will assume full financial responsibility for Alaska mental health.

Senator Hill. The Federal Government will be out of it, then, entirely?

Dr. Shafer. That is right, sir.

The cost of providing care and treatment alone will exceed this appropriation and necessitate increased appropriation by the Territory.

The $2,165,000 requested under this appropriation for fiscal year 1959 is the same amount requested for fiscal year 1958. It will permit continuation of the Mental Health Enabling Act grant, the special health grant, and technical assistance in the same level. The amount for field and laboratory research is also the same as for 1958.

I shall be glad to answer any questions you may have.

APPROPRIATION ESTIMATE

Construction, Mental Health Facilities, Territory of Alaska

For payments of construction of hospital and other facilities pursuant to section 372 of the Public Health Service Act, as amended (42 U. S. C. 274), $6,500,000 to remain available until expended.

EFFECT OF HOUSE ACTION

The full amount of the grant to the Territory of Alaska, $6,500,000, has been allowed by the House. However, a language change limiting the availability of funds under this appropriation to June 30, 1960, could have a serious effect on the construction of the necessary mental-health facilities in Alaska. Although it is currently anticipated that detailed construction plans will be developed and construction contracts awarded by June 30, 1960, it is not certain that this time schedule can be met. Many factors, including weather, distance from the States, and other conditions, could cause unavoidable delays. It is requested, therefore, that the original language be restored.

PRELIMINARY PLANNING

Senator HILL. What about the limitation making your funds available until June 30, 1960?

Dr. SHAFER. That refers to the construction of mental health facilities in Alaska, Mr. Chairman.

Alaska is moving ahead with preliminary planning on the construction of their mental hospital, and their schedule calls for beginning construction in May of 1960, if they are able to proceed on schedule with preliminary planning, the awarding of contracts for final drawings, and then the awarding of contracts for construction.

However, schedules in Alaska are always variable because of climate and construction conditions so that I feel that in order to play safe this deadline should be deferred.

Senator HILL. To what date?

Dr. SHAFER. I would say just 1 year additional would be quite adequate.

Senator HILL. You mean June 30, 1961?

Dr. SHAFER. That should give them all the time that they need. We do not foresee difficulties. The Alaska authorities anticipate starting construction before this deadline, but, because of conditions existing in Alaska, we hesitate to have a deadline which occurs only 2 months after their scheduled date for starting construction.

Senator HILL. If we remove this deadline now what will be the psychological effect on them?

Dr. SHAFER. The Alaska Department of Health is still moving ahead rapidly with their planning. They have obtained a loan from the Housing and Home Finance Agency of $110,000 and have already started preliminary planning for the construction of this hospital in Alaska. They actually are trying to save one construction season by getting on with their planning at this time.

TIME LIMITATION

Senator HILL. I was wondering if we were going to remove this limitation of June 30, 1960, whether it might be wise to wait and do it next year rather than this year.

I do not want to do anything to encourage them not to go forward.

Dr. SHAFER. I personally can see nothing wrong with that, Mr. Chairman. I think that in a year's time we will have a much clearer picture of the construction situation.

Senator HILL. Then you think we might well leave the target date June 30, 1960, so far as this year is concerned and then we can consider this matter in the next year, 1959. Would that be your thinking?

Dr. SHAFER. I should think that that would be quite satisfactory.

Senator HILL. We want to lend all the stimulation to them to go forward and not to delay in any way.

If you had to remove it next year you could remove it then as well as now. You think that would be satisfactory?

Dr. SHAFER. I certainly do.

Senator HILL. Senator Ives, do you have any questions to ask about this matter?

Senator IVES. I have no questions.

Senator HILL. Doctor, we are obliged to you gentlemen, thank you very much.

CONSTRUCTION OF FACILITIES

Was there anything else you wanted to add?

Dr. SHAFER. I have a statement on the construction of mental health facilities which we have just discussed.

Could I file that for the record?

Senator HILL. That will go in the record as part of your statement.

If there is nothing else, thank you, gentlemen.

Dr. SHAFER. Thank you very much, Mr. Chairman.

(The statement referred to follows:)

STATEMENT BY CHIEF, DIVISION OF GENERAL HEALTH SERVICES

Mr. Chairman and members of the committee, there are now no mental hospital facilities in Alaska. For the past 50 years, Alaskan mentally ill have been transported to a hospital in Portland, Oreg., for care and treatment. This arrangement, which requires carrying mentally ill people hundreds of miles from home and family, is unsatisfactory, but will have to be continued until mental hospitals are built in Alaska. The Alaska Mental Health Enabling Act of the 84th Congress had as one objective the alleviation of this situation. This appropriation provides funds authorized by section 372 of this act to assist the Territory of Alaska to construct hospital facilities in Alaska.

The Territory has submitted and the Surgeon General has approved a comprehensive construction plan as required by the Federal act. Appropriation of the $6,500,000 authorized by the Alaska Mental Health Enabling Act will enable the Territory to build a central hospital of about 225 beds (expandable to 400) in Anchorage, and with the assistance of Territorial appropriations for the same purpose, smaller units of 30 and 20 beds each in Fairbanks and in Juneau. In addition, the Territory will construct several 1 or 2 bed brief care units in strategically located general hospitals and facilities for the administration of preventive and outpatient services.

The Territory has acquired the site for the central hospital and engaged an architect to prepare plans and specifications and make the necessary site survey and soil investigation. They have recently hired a psychiatrist in administration to direct their entire mental health program, and they hope to complete the planning stage and secure construction bids within the fiscal year 1959.

The Territory has taken every possible action to hasten the time when their mentally ill can be cared for in Alaska, and this appropriation will permit them to translate their plans into action and construct the initial facilities which will form the nucleus of their comprehensive plan.

EFFECT OF HOUSE ACTION

By limiting the availability of funds under this appropriation to June 30, 1960, it could have a serious effect on the construction of the necessary mental health facilities in Alaska. It is currently anticipated that detailed construction plans will be developed and construction contracts awarded by June 30, 1960; however, it is not certain that this time schedule can be met. It is urgently requested, therefore, that the limitation to June 30, 1960, which the House placed on the availability of these funds be removed, thus making the funds available until spent.

I shall be glad to answer any questions you may have.

Control of Venereal Diseases

STATEMENT OF DR. C. A. SMITH, DEPUTY CHIEF, COMMUNICABLE DISEASE CENTER, ACCOMPANIED BY JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

Appropriation Estimate

Control of Venereal Diseases

[Venereal diseases:] To carry out the purposes of sections 314 (a) and 363 of the Act with respect to venereal diseases [including the operation and maintenance of centers for the diagnosis and treatment of persons afflicted with venereal diseases;] and for grants of money, services, supplies, equipment, and use of facilities to States, as defined in the Act, and with the approval of the respective State health authorities, to counties, health districts, and other political subdivisions of the States, for [the foregoing purposes] *venereal disease control activities*, in such amounts and upon such terms and conditions as the Surgeon General may determine; [$4,415,000] *$4,400,000.*

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate (total obligations)	$4,415,000	$4,400,000	$4,400,000

Obligations by activities

	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Grants to States for venereal disease control		$1,700,000		$1,700,000		$1,700,000
2. Director operations:						
(a) Clinical and laboratory research	100	693,500	100	678,500	100	678,500
(b) Technical assistance to States	247	1,808,100	247	1,808,100	247	1,808,100
(c) Administration	30	213,400	30	213,400	30	213,400
Total obligations	377	4,415,000	377	4,400,000	377	4,400,000

Obligations by objects

	1958 appropriation	1959 budget estimate	1959 House allowance
Total number of permanent positions	377	377	377
Full-time equivalent of all other positions	92	92	92
Average number of all employees	439	439	439
Number of employees at end of year	460	460	460
01 Personal services	$2,617,600	$2,617,600	$2,617,600
02 Travel	122,900	122,900	122,900
03 Transportation of things	38,500	38,500	38,500
04 Communication services	22,000	22,000	22,000
05 Rents and utility services	11,000	11,000	11,000
06 Printing and reproduction	17,000	17,000	17,000
07 Other contractual services	36,700	36,700	36,700
Research contracts	35,000	35,000	35,000
08 Supplies and materials	112,600	108,500	108,500
09 Equipment	36,500	21,500	21,500
11 Grants, subsidies, and contributions	1,342,200	1,346,300	1,346,300
13 Refunds, awards, and indemnities	0	0	0
15 Taxes and assessments	23,000	23,000	23,000
Total obligations	4,415,000	4,400,000	4,400,000

Summary of changes

	Positions	Amount
1958 actual appropriation	377	$4,415,000
Deduct nonrecurring equipment costs		−15,000
1959 base	377	4,400,000
1959 appropriation request	377	4,400,000
Net change requested	0	0

	1959 budget estimate	1959 House allowance
Decreases:		
Reduction in supplies and materials to absorb cost of annualization of retirement contributions	−$4,100	−$4,100
Increases:		
For mandatory items:		
Retirement contributions annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)	4,100	4,100
Total change requested	0	0

PREPARED STATEMENT

Senator HILL. Dr. C. A. Smith, Deputy Chief, Communicable Disease Center, on the "Control of venereal diseases."

Doctor, do you have a prepared statement?

Dr. SMITH. Yes, sir, I have a formal statement and a summary of that formal statement that I would like to read.

Senator HILL. We will put the formal statement in the record in full and will you give us the summary?

(The statement referred to follows:)

STATEMENT OF DEPUTY CHIEF, COMMUNICABLE DISEASE CENTER

Mr. Chairman and members of the committee, last year at this time it was necessary to report an increase in the number of cases of infectious syphilis reported during the previous fiscal year. Although rises in scattered individual States had been noted in previous years, the total number of reported cases had until that year reflected at least some gains in the control of infectious syphilis. This year the report is more encouraging—a small but rewarding decrease in the number of cases of infectious syphilis is evident.

Although reassuring, there remains abundant evidence that the rapidly declining trend of disease incidence evident before 1955 has not been firmly reestablished. The gains are small and the numbers too great to permit any relaxation in the present efforts to maintain control over these diseases.

VENEREAL DISEASE PROBLEM

The more important considerations indicating the need for a continued intensive control program are:

1. In fiscal year 1957, the total number of syphilis cases reported was 135,542. This total is 6.7 percent (or 9,323 cases) higher than the comparable figure for 1956. It is believed that this represents an increase in program efficiency.

2. In fiscal year 1956, 26,771 cases of infectious, or potentially infectious, syphilis were reported. The comparable figure for the past fiscal year is only 142 cases less than that number, or a decrease of only one-half of 1 percent in cases of prime public health importance.

3. In fiscal year 1957, 216,476 cases of gonorrhea were reported, a decrease of 7.2 percent from 1956. We believe the number of cases reported is substantially below the actual number that occur. Major factors for this involve a lesser casefinding effort in this area due to concentration on early syphilis control, underreporting, and the difficulty of diagnosing gonorrhea in the female.

The increasing mobility of the general American public, as well as defense construction workers, military personnel, and migrant and seasonal workers, increases the opportunity for spread of these diseases from one geographical area to another. This characteristic, combined with the rapid geometric spread of venereal disease in exposed populations, increases the difficulty of controlling venereal disease. For example, over 15 percent of the contacts of venereal disease patients live outside the State diagnosing the original case. More than half of the case of infectious venereal disease are reported as occurring in teenagers and young adults. The high incidence of disease in such a sexually active age group significantly increases the risk of rapid disease spread.

FEDERAL ROLE IN VENEREAL DISEASE CONTROL

Due to the possibilities of rapid shifts in disease problems, the venereal disease program views its primary role in the Federal-State partnership in venereal disease control to provide assistance to State and local areas in meeting special problem situations. To meet these problems, venereal disease grants are allocated on a special project basis. The magnitude of the problem, the distribution of cases in special population groups such as teen-agers or migrants, the burden of a superimposed federally created problem such as military installations or defense-related industries, and the availability of local resources all are considered in determining the amount of assistance necessary.

In addition to project grant support, the venereal disease program, on request, supplements the epidemiologic services of State and local programs through the assignment of highly trained specialist field personnel for selective blood testing, patient interviewing, and contact investigation. These services may be made available for short term emergency assistance to meet an actual or threatened epidemic, or they may be for longer terms to develop and demonstrate new or more efficient program technique applicable in areas throughout the United States.

CONTROL PROGRAM

During the present fiscal year, particular emphasis is being given to applying a refined epidemiological technique known as cluster blood testing. Preliminary evaluation of this technique, which is based on the testing of associates as well as sex contacts of infected cases, indicates that its proper use may as much as double the number of new infectious syphilis cases brought to treatment as a result of interviewing a case of primary and secondary syphilis.

Another program activity which is being actively promoted by venereal disease program personnel is the extension of health department epidemiologic services to private physicians and their patients. Some 40 percent of the total number of infectious syphilis cases in the continental United States now are being reported by private physicians, and any failure to find and treat the source and spread cases from these infections will jeopardize the success of all venereal disease control activities.

RESEARCH PROGRAM

To provide the tools needed to carry out venereal disease control work throughout the country, the venereal disease program supports an active research program designed to solve operational problems as well as to make basic contributions to our knowledge of venereal disease diagnosis, treatment, and immunology. To illustrate the need for research stimulated by program demands, one of the problems associated with serologic screening of large migrant groups related to the time lag between the collection of a blood specimen and the reporting of the test result. During this interval, even if it were so short as one day, the migrants would have dispersed to many different localities, necessitating a complicated followup program to bring infected individuals in for treatment. To eliminate the need for this costly followup procedure, the venereal disease program undertook to develop a test that could be performed quickly on the spot, so that reactors could be treated before they left the testing site. The result was the rapid plasma reagin test. This test, which meets all the aforementioned criteria, permits the undertaking of bloodtesting programs on a scale previously considered impractical. One of its uses is now being demonstrated in the screening, for syphilis, of Mexican contract laborers (braceros) entering the United States through the Department of Labor reception center at El Centro, Calif.

Another practical problem on which the venereal disease laboratories are working is that of biologic false positive reactions in serologic tests for syphilis. Tests previously developed to reduce this problem have been too costly and too complex to be used routinely by State laboratories. A new test, the Reiter protein test, using an antigen from an easily cultivable strain of treponemes has been developed recently. Preliminary results indicate that this test is not only comparatively inexpensive, but is exceptionally specific. Field trials are now underway to confirm these laboratory evaluations, and if successful, a most important step will have been made toward a practical solution of this problem.

SUMMARY

In summary, the extent of the venereal disease problem demands unremitting effort at all levels. The budget of $4,400,000 for venereal disease control provides for only the most essential Federal activities necessary to maintain the gains made during past years.

GENERAL STATEMENT

Dr. SMITH. Mr. Chairman and members of the committee, last year at this time it was necessary to report an increase in the number of cases of infectious syphilis reported during the previous fiscal year. Although rises in scattered individual States had been noted in previous years, the total number of reported cases had until that year reflected at least some gains in the control of infectious syphilis. This year the report is more encouraging—a small but rewarding decrease in the number of cases of infectious syphilis is evident.

TREND TOWARD DECLINE NOT ESTABLISHED

Although reassuring, there remains abundant evidence that the rapidly declining trend of disease incidence evident before 1955 has not been firmly reestablished. In 1957 more than 135,500 cases of syphilis were reported of which some 26,600 were in an infectious or potentially infectious stage. The gains are too small and the numbers still too great to permit any relaxation in the present efforts to maintain control over these diseases.

Population mobility and the possible geometric spread of venereal diseases in exposed groups increases the possibility of rapid transmission of venereal diseases from one area to another. To meet shifting disease problems, venereal disease grants are allocated on a special project basis and epidemiologic assistance is provided for the conduct

of blood testing, patient interviewing, and contact investigation activities in areas where a significant venereal disease problem exists. During the present fiscal year, particular emphasis is being given to applying a refined epidemiological technique known as cluster testing, which is based on the investigation of associates as well as sex contacts of infected cases. A second program activity, which is being actively promoted by veneral disease program personnel, is the extension of health department epidemiologic services to private physicians and their patients.

CONTINUED RESEARCH NEEDED

To provide the tools needed to carry venereal disease control work throughout the country, the venereal disease program conducts an active research program designed to solve operational problems as well as to make basic contributions to our knowledge of venereal disease diagnosis and treatment.

In closing, let me restate that the battle against venereal disease has not yet been won, that continued activity at all levels is essential to maintain progress toward the final elmination of venereal diseases as public health problems, and that the budget before you of $4,400,000 for venereal disease control provides only for the most essential Federal activities in this regard.

If there are any questions I would be happy to try to answer them.

Senator HILL. Doctor, of course your work is in cooperation and conjunction with your State health departments and local county health departments, is that right?

Dr. SMITH. Yes, sir.

Senator HILL. I notice that you sustained a reduction of $15,000 by the budget. What does that $15,000 cover?

Dr. SMITH. That was removed for nonrecurring items in a laboratory budget so that our level of activity is essentially the same as it was last year.

Senator HILL. In other words, the House allowed you the budget estimate and if the Senate allows the same your activities for the next fiscal year will be the same as this fiscal year; is that correct, sir?

Dr. SMITH. Yes, sir.

Senator HILL. Of course, as you know, your funds have been very much decreased through the years. There has been a marked reduction in the diseases, is that not true?

Dr. SMITH. Yes, sir, that is very definitely true.

FUNDS REQUESTED

Senator HILL. How much did you request of the Department?

Dr. SMITH. $5,800,000.

Senator HILL. $5,800,000?

Dr. SMITH. Yes, sir.

Senator HILL. What would the additional $1,400,000 have gone for?

Dr. SMITH. Actually, it was $1.3 million in addition to the project grant funds and $100,000 for additional research primarily in the field of gonorrhea.

Senator HILL. $1,300,000 would have gone for grants to the States and county health units?

Dr. SMITH. Yes, sir.

Senator HILL. And $100,000 for research in the field of gonorrhea?

Dr. SMITH. Yes, sir.

Senator HILL. Where would you have carried on that research?

Dr. SMITH. The research would have been at least started in the Venereal Disease Laboratory, but would have probably been expanded into the medical schools where they have particular interest in this subject. No places were chosen.

Senator HILL. What phase of the disease would you have researched?

Dr. SMITH. I think one of the great difficulties in gonorrhea control and, as you know it has not responded as syphilis control has, is the fact that our diagnostic tests are less accurate, less fast than is true in syphilis.

POSSIBILITY OF FAST DIAGNOSTIC TEST

We would hope that research would bring forward for practical use a fast diagnostic test probably in the fluorescent antibody technique field or even more hopefully in developing a blood test for gonorrhea.

Senator HILL. A blood test?

Dr. SMITH. Yes, sir.

Senator HILL. Do you have pretty good facts up to date on which to base that hope that it would lead to that? Do you have some leads on which you base your hope?

Dr. SMITH. There is a complement fixation test for gonorrhea that has been used as a research tool for some time. It is not a diagnostic test at the moment. The whole field of antigen production has to be reviewed and, with sufficiently good antigens, I feel that a blood test is a distinct possibility.

Senator HILL. I notice in the House hearings a discussion of the fluorescent antibody technique. Tell us something of that.

Dr. SMITH. The fluorescent antibody technique has been used in relationship to venereal diseases and, at the present time, the test is usable both on gonorrhea and on syphilis. It is in the first stage of development now on one of the minor venereal diseases, and may be a very productive diagnostic tool in all those areas. I am speaking only to venereal diseases diagnosis.

Senator HILL. Does it give real promise of effectiveness?

Dr. SMITH. Yes, sir.

Senator HILL. What are you doing with it? Do you have the funds to carry on this work now?

Dr. SMITH. We are carrying on the developmental part of it at the present time. No practical tests even in the developmental stage are ready for field trial.

Senator HILL. Are you ready for a practical test?

Dr. SMITH. We feel that we will be, before another year is up.

Senator HILL. In other words, you think that when you come here next year, you may be ready to say, "We are ready to go forward with the practical test"; is that it?

Dr. SMITH. Yes, sir.

Senator HILL. Do you have questions, Senator Ives?

Senator IVES. I have no questions.

Senator HILL. Doctor and gentlemen, we are very much obliged to you. Thank you very much.

Dr. SMITH. Thank you.

SUPPORT FOR VENEREAL DISEASE FUNDS

Senator HILL. I have received letters from the director of the Georgia Department of Public Health and from the State health officer of the State of Louisiana calling attention to the need for an increased appropriation for venereal-disease activities. These letters will be included in the hearings.

(The letters referred to follow:)

STATE OF GEORGIA,
DEPARTMENT OF PUBLIC HEALTH,
Atlanta, April 7, 1958.

Hon. LISTER HILL,
Senate Office Building, Washington, D. C.

DEAR SENATOR HILL: Copies of the February 1958 joint statement of today's venereal disease control problem, prepared by the Association of State and Territorial Health Officers, the American Venereal Disease Association, and the American Social Hygiene Association, were recently sent to you and to other Members of Congress.

This statement reflects the basic minimum needs for an effective and progressive nationwide venereal disease control program for the coming fiscal year as expressed by the respective State health officers and the health officers of the major cities of the United States.

The nature of the venereal diseases dictates that we continue an effective and adequate control program through the cooperative efforts of Federal, State, and local health agencies and the private physicians of the Nation.

The currently proposed $4,400,000 Federal appropriation for venereal disease control for fiscal 1959 is inadequate to insure a control program which will reestablish and continue a true downward trend in the attack rate of the venereal diseases.

Since this appropriation will be acted upon by the Subcommittee on Labor and Health, Education, and Welfare of the Senate Appropriations Committee in the very near future, I earnestly request that you give consideration to the recommendations presented in the February 1958 joint statement.

Yours very truly,

T. F. SELLERS, M. D.,
Director, Georgia Department of Public Health.

STATE OF LOUISIANA,
DEPARTMENT OF HEALTH,
New Orleans, April 10, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Labor and Health, Education, and Welfare of the Senate Appropriations Committee, Washington, D. C.

DEAR SENATOR HILL: In the State of Louisiana, as throughout the United States, the incidence in venereal disease has been on the increase during the past 3 years. The cases reported within the State of Louisiana for this period are as follows:

Total syphilis cases reported (known military cases excluded)

Fiscal 1955	3,794
Fiscal 1956	4,892
Fiscal 1957	6,465

We feel as though this tremendous rise in the morbidity of syphilis is a direct reflection of the lessening of control measures occasioned by reduction in the Federal appropriations of 1953.

Last year, with the aid of Federal funds, we intensively increased our venereal disease control program, and are hopeful of being in a position to do the same in the coming fiscal year in order to combat this rise in venereal disease.

We urgently request, therefore, that you look favorably upon the recommended Federal appropriation of $5,700,000 for venereal disease control measures.

Yours very truly,

W. J. REIN, M. D.,
State Health Officer.

Control of Tuberculosis

STATEMENT OF DR. EDWARD T. BLOMQUIST, CHIEF, TUBERCULOSIS PROGRAM, ACCOMPANIED BY DR. DAVID E. PRICE, CHIEF, BUREAU OF STATE SERVICES; STEPHEN J. ACKERMAN, FINANCIAL MANAGEMENT OFFICER, BUREAU OF STATE SERVICES; DR. LEROY E. BURNEY, SURGEON GENERAL; ROY L. HARLOW, CHIEF FINANCE OFFICER; AND JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

Control of Tuberculosis

[Tuberculosis:] To carry out the purpose of section 314 (b) of the Act, [$7,000,000] *$5,386,000,* of which not less than [$4,500,000] *$3,000,000* shall be available only for grants to States, to be matched by an equal amount of State and local funds expended for the same purpose, for direct expenses of prevention and case-finding projects including salaries, fees, and travel of personnel directly engaged in prevention and case-finding and the necessary equipment and supplies used directly in prevention and case-finding operations, but excluding the purchase of care in hospitals and sanatoria.

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate (total obligations)	$7,000,000	$5,386,000	$5,386,000

Obligations by activities

	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Grants to States for tuberculosis control		$4,500,000		$3,000,000		$3,000,000
2. Direct operations:						
(a) Cooperative applied research	137	1,786,100	137	1,736,000	137	1,736,000
(b) Technical assistance to States	72	555,400	68	500,000	68	500,000
(c) Administration	24	158,500	22	150,000	22	150,000
Total obligations	233	7,000,000	227	5,386,000	227	5,386,000

Obligations by objects

	1958 appropriation	1959 budget estimate	1959 House allowance
Total number of permanent positions	233	227	227
Full-time equivalent of all other positions	20	20	20
Average number of all employees	237	232	232
Number of employees at end of year	270	264	264
01 Personal services	$1,375,000	$1,331,500	$1,331,500
02 Travel	173,800	167,800	167,800
03 Transportation of things	26,600	26,000	26,000
04 Communication services	12,000	12,000	12,000
05 Rents and utility services	11,000	11,000	11,000
06 Printing and reproduction	11,000	11,000	11,000
07 Other contractual services	376,300	318,800	318,800
08 Supplies and materials	405,000	400,500	400,500
09 Equipment	45,200	42,900	42,900
11 Grants, subsidies, and contributions	4,558,900	3,058,900	3,058,900
13 Refunds, awards, and indemnities	0	0	0
15 Taxes and assessments	5,800	5,600	5,600
Total obligations	7,000,000	5,386,000	5,386,000

Summary of changes

	Positions	Amount
1958 actual appropriation	233	$7,000,000
1959 appropriation request	227	5,386,000
Net change requested	−6	−1,614,000

	1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount
Increase:				
For mandatory items: Retirement contributions annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)		$2,200		$2,200
Decreases:				
Reduction in 01 and miscellaneous objects to absorb cost of annualization of retirement contributions		−2,200		−2,200
Reduction in grants-in-aid to States		−1,500,000		−1,500,000
Isoniazid field studies		−50,100		−50,100
Reduction in technical assistance to States	−4	−55,400	−4	−55,400
Reduction in administration	−2	−8,500	−2	−8,500
Total decreases	−6	−1,616,200	−6	−1,616,200
Net change requested	−6	−1,614,000	−6	−1,614,000

Allocations of grant-in-aid funds for tuberculosis control

State or Territory	1957 allocations	1958 allocations	Estimated 1959 allocations	State or Territory	1957 allocations	1958 allocations	Estimated 1959 allocations
Alabama	$106,100	$100,800	$66,900	New Jersey	$129,900	$123,400	$81,800
Arizona	54,900	57,600	42,300	New Mexico	32,400	34,000	25,000
Arkansas	80,900	76,900	50,100	New York	398,800	418,700	274,400
California	270,200	283,700	202,200	North Carolina	103,500	100,000	65,800
Colorado	35,600	35,300	25,900	North Dakota	23,200	22,000	13,700
Connecticut	46,600	44,300	30,100	Ohio	187,800	197,200	130,700
Delaware	16,000	16,500	13,400	Oklahoma	61,400	61,700	41,200
District of Columbia	39,700	41,700	27,700	Oregon	34,300	35,300	25,700
Florida	79,900	83,900	62,600	Pennsylvania	277,400	263,500	164,100
Georgia	108,400	103,000	63,800	Rhode Island	24,800	24,000	18,200
Idaho	16,200	15,600	12,700	South Carolina	71,500	67,900	45,700
Illinois	228,900	239,400	160,900	South Dakota	20,800	19,800	15,600
Indiana	87,800	88,800	60,900	Tennessee	134,800	128,100	80,000
Iowa	41,900	39,800	28,300	Texas	207,800	197,400	128,800
Kansas	36,300	36,500	26,400	Utah	18,000	17,600	14,500
Kentucky	128,600	122,200	78,400	Vermont	16,900	16,200	13,200
Louisiana	89,500	87,200	56,900	Virginia	108,700	112,300	75,100
Maine	26,200	25,500	19,200	Washington	49,300	51,800	39,500
Maryland	88,800	88,000	58,200	West Virginia	61,500	59,800	41,200
Massachusetts	115,300	113,800	75,300	Wisconsin	56,000	58,800	44,000
Michigan	139,700	146,700	103,800	Wyoming	11,300	11,300	10,000
Minnesota	51,100	53,200	37,100	Alaska	38,800	36,900	22,000
Mississippi	79,000	75,100	46,500	Hawaii	27,100	25,700	17,200
Missouri	112,800	110,500	72,300	Puerto Rico	240,900	236,600	113,400
Montana	19,800	20,600	16,500	Virgin Islands	8,300	8,300	8,000
Nebraska	25,500	25,200	19,400	Guam	0	11,300	9,400
Nevada	12,800	12,900	11,400	Total	4,500,000	4,500,000	3,000,000
New Hampshire	16,300	15,700	12,600				

PREPARED STATEMENT

Senator HILL. Dr. Edward T. Blomquist, chief, tuberculosis program on the control of tuberculosis.

Do you have a prepared statement?

Dr. BLOMQUIST. I have a formal statement.

Senator HILL. Will you file that and then give us a summary.

(The statement referred to follows:)

STATEMENT OF CHIEF, TUBERCULOSIS PROGRAM

Mr. Chairman and members of the committee, during the last few years there has been a widespread belief that the tuberculosis problem in the United States has undergone changes so massive and rapid as to permit predictions of its reduction to a negligible public entity. Current facts and figures lend a certain credence to such assumption. With every passing year, fewer people die of tuberculosis; illness from the disease decreases in frequency and severity; and fewer children and young adults are infected with the germs of a disease that led their fathers and grandfathers into prolonged and debilitating sickness and all too frequently into premature death.

We have drugs that are, if not ideal, marvels of effectiveness. Surgical techniques are highly refined. The duration of necessary hospitalization has been reduced from an average of 2 years to 8 months. As a result of faster turnover and declining incidence, hospital beds are in diminishing demand. Because the disease can now be pinpointed in strategic areas and population groups, X-ray case-finding efforts can be concentrated where the hazard is high. New research work holds promise of an effective preventive against breakdowns. Furthermore, we can almost guarantee that a tuberculous person, if not in terminal stage, can be cured and be assured of a continuing productive life.

As well off as we now seem to be, nearly 14,000 men, women, and children died last year of tuberculosis; 69,000 new, active, and probably active cases were reported to health authorities. There are 250,000 active cases of tuberculosis in the United States today plus 350,000 inactive cases requiring public health services, and 1,200,000 persons who once had active disease. Furthermore, it is reliably estimated that 50 million persons in this country are infected with the germs of tuberculosis.

These active and inactive cases, the old cases, and these millions of infected people constitute a reservoir of disease that could reverse the great advances. As it is our duty to proclaim progress, it is equally our responsibility to sound warnings of danger. Thus, we note that an increasing proportion of new cases of tuberculosis are occurring in older persons who were infected many years ago. Until effective methods are developed to prevent or at least reduce the risk of breakdown among the vast reservoir of the previously infected, tuberculosis will remain a serious threat to these persons.

Similarly we report that in recent years there has been practically no decline in tuberculosis deaths in the Northeastern States—now, for the first time in history, the rate in this region is the highest in the country. This is related to the fact that tuberculosis is a particularly intensive problem in our large, crowded cities. Furthermore, we recognize significant variations between different population groups—for example, in 1956 the death rate among males over 45 was 35 percent 100,000 as compared to 8.4 for the entire country, again indicating that tuberculosis, once the scourge of youth, is increasingly a disease of the aging.

A critically important problem in the current tuberculosis picture is the presence outside hospitals of approximately 300,000 persons with significant tuberculosis. Although improved therapy has saved many of these persons from death and permitted early hospital discharges, most of these persons require extended periods of outpatient care. In most cases, drugs must continue to be taken and clinical services provided for 18 to 24 months after tuberculosis patients return to their homes. However, recent studies have shown us that a startling proportion of these patients are not receiving adequate care and supervision. For the country as a whole, we have not yet developed a workable system whereby patients outside hospitals can realize the full benefits of modern medical and public health resources.

However, if we are to keep this disease under control and restore these individuals to productive lives, these patients—the potential sources of new disease—need drugs, continuing medical and nursing supervision, and essential social and economic counsel. Only in this way will the public as a whole, as well as these sick persons, receive the full benefits of the great therapeutic gains of the recent past. Now and in the future much of the responsibility for providing these necessary services to tuberculosis patients outside hospitals will rest on State and local health agencies.

Concurrently, State and local health agencies are faced with the continuing tasks of identifying and bringing to treatment new cases of tuberculosis. In line with Public Health Service advice, these programs are currently being concentrated in areas and groups of high risk of tuberculosis infection and disease. In this way, a higher return of newly diagnosed cases is realized while unnecessary radiation exposure is avoided. In many areas, health authorities are considering again the feasibility of utilizing the tuberculin test as an initial case-finding device.

In the research field, two areas are receiving our major attention: (1) the careful testing by means of controlled studies of the effectiveness of isoniazid as a preventive, or prophylactic, against tuberculosis; (2) the development of a specific drug that will kill the germ of tuberculosis on contact. Streptomycin and isoniazid, although great boons in effecting cures, are bacteriostatic; that is, they inhibit the action and growth of the tubercle bacillus. What is needed for the final onslaught against this disease is a bacteriocidal drug.

Research is also being directed at determining the potentialities of isoniazid as a prophylactic agent. These studies showed such promise among laboratory animals that trials of the drug as a preventive of tuberculosis in human beings have been organized and are now going forward in numerous communities throughout the country.

An initial project, involving more than 2,700 children in 33 pediatric clinics in the United States, Puerto Rico, Mexico, and Canada, tested the effect of isoniazid in preventing complications of primary tuberculosis. The first results from this work show that during the 12 months these children have been taking isoniazid, at least 80 percent of the major complications of childhood tuberculosis were prevented. On the basis of these findings, health agencies and private physicians are provided with a new, well-confirmed method of control that can be applied now. It is recommended that infants under 1 year of age who are tuberculin positive and those between 1 and 4 who have X-ray evidence of active, primary tuberculosis should be treated with daily doses of isoniazid for a year.

To complement this knowledge, further research is required to determine whether this protection continues for an extended period after the drug is discontinued and whether similar protection can be given other population groups and under different conditions. Therefore, studies among close contacts of newly discovered cases of tuberculosis are being carried out. Trials have already begun in about 40 communities and institutions in 16 States. Additional groups are being added to this research project monthly. A peak workload on this research will probably be reached in fiscal year 1959.

In summary, although dramatic advances have been gained against tuberculosis, there is still much work to be done before this job is completed. The best possible care should be provided to known patients, both inside and outside hospitals. Case finding efforts should be focused on identifying unknown cases in the most efficient manner available. Research should be directed at finding better agents for preventing tuberculosis and for treating those who are unfortunately stricken with this disease. These are our continuing principal responsibilities as mandated by the current tuberculosis problem in the United States.

To carry out this effort and to assist State and local health departments in their programs, $5,386,000 is requested. This is $1,614,000 less than the appropriation for fiscal year 1958.

Control of tuberculosis, Public Health Service—Summary of changes

	Positions	Amount
1958 actual appropriation	233	$7,000,000
1959 appropriation request	227	5,386,000
Net change requested	−6	−1,614,000

	1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount
Increase:				
For mandatory items:				
Retirement contributions annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)		$2,200		$2,200
Decreases:				
Reduction in 01 and miscellaneous objects to absorb cost of annualization of retirement contributions		−2,200		−2,200
Reduction in grants-in-aid to States		−1,500,000		−1,500,000
Isoniazid field studies		−50,100		−50,100
Reduction in technical assistance to States	−4	−55,400	−4	−55,400
Reduction in administration	−2	−8,500	−2	−8,500
Total decreases	−6	−1,616,200	−6	−1,616,200
Net change requested	−6	−1,614,000	−6	−1,614,000

PROBLEM NOT SOLVED

Dr. BLOMQUIST. Mr. Chairman and members of the committee, during the last few years there has developed a widespread belief that the tuberculosis problem in the United States has undergone changes so massive and rapid as to permit predictions of its imminent reduction to a neligible public health entity. It is true that with every passing year fewer people die of tuberculosis; illness from the disease decreases in frequency and severity; and fewer children and young adults are infected. However, such predictions are still premature. There is still much work to be done in tuberculosis control before the job is completed.

Last year 14,000 men, women, and children died of tuberculosis. Sixty-nine thousand new, active, and probably active cases were reported to health authorities. There are 250,000 active cases of

tuberculosis in the United States today plus 350,000 inactive cases requiring public health services, and over a million persons known to have had active disease. These active and inactive, the old cases, and the millions of infected people constitute a reservoir of disease that could reverse the great advances of the recent past.

One of our most important problems in the current tuberculosis picture is the fact that approximatley 300,000 persons with tuberculosis who are in need of continued services are outside hospitals. Although improved therapy has saved many of these persons from death and permitted early hospital discharges, most of these persons require extended periods of outpatient care. In most cases, drugs must continue to be taken and clinical services provided for a year and a half to two years after hospital discharge. However, recent studies show that a startling proportion of these patients are not receiving adequate care and supervision. For the country as a whole we have not yet developed a workable system whereby persons with tuberculosis outside hospitals can realize the full benefits of modern medical and public health resources. Now, and in the future, much of this responsibility for providing and arranging the services needed by tuberculosis patients outside hospitals will rest on State and local health departments.

WORK OF STATE AND LOCAL AGENCIES

Concurrently, State and local health agencies are continuing their efforts to identify and bring to treatment promptly all new cases of tuberculosis. These programs are now being concentrated in areas and groups of high risk of tuberculosis. In this way, a higher return of newly diagnosed cases will be realized while unnecessary X-raying is avoided. In many areas, health authorities are evaluating their current case-finding activities and are considering the feasibility of utilizing the tuberculin test as an initial case-finding device in low prevalence groups.

TESTS WITH ISONIAZID

In the research field, the tuberculosis program is directing primary attention to trials testing the prophylactic effectiveness of the drug isoniazid. The first results from an initial project, involving more than 2,700 children in 33 pediatric clinics throughout the country, are now available. It was found that, during the 12 months these children took daily doses of isoniazid, at least 80 percent of the major complications of childhood tuberculosis were prevented. On the basis of these findings, health agencies and private physicians are provided with a new, well-confirmed method of control.

We now recommend that infants under 1 year of age who are tuberculin positive and those between 1 and 4 who have X-ray evidence of active, primary tuberculosis should be treated with daily doses of isoniazid for a year. Further research will determine whether this protection continues for an extended period after the drug is discontinued and whether similar protection can be given other population groups and under different conditions.

These activities directed at finding new cases of tuberculosis, improving the treatment of known cases, both inside and outside hospitals, and developing better methods of preventing further infection and disease are the principal assignments of the future in tuberculosis control.

To carry out this effort and to assist State and local health departments in their programs, $5,386,000 is requested. This is $1,614,000 less than the appropriation for fiscal year 1958.

Mr. Chairman, I shall be glad to attempt to answer any questions the committee may have to ask regarding this budget.

Senator HILL. Let me ask this question, Doctor. I notice that last statement that the budget estimate is $1,614,000 less than the appropriation for fiscal year 1958.

CASE FINDING

I was also impressed with your earlier statement, to be found on page 1 in the second paragraph:

> These active and inactive cases, the old cases, and the millions of infected people constitute a reservoir of disease that could reverse the great advances of the recent past.

We know that there is nothing more important in this whole matter of tuberculosis than case finding because it is so terribly contagious with so much danger to the well person from the diseased person.

How much of that $1,614,000 under the amount you had this year would have gone for case finding?

Dr. BLOMQUIST. A good share of that amount is a reduction in grants-in-aid to States. This amounts to a $1,500,000 reduction. A good share of that has always gone into case finding. We know from our analyses that from the moneys that go to the State health departments and the local health departments large amounts were used for continuing case-finding activities year after year.

Senator HILL. So that of the $1,614,000, $1,500,000 would have gone as grants to the States and to the local county health units?

Dr. BLOMQUIST. Yes, sir.

Senator HILL. And it would have gone primarily for case finding?

Dr. BLOMQUIST. We find that a good share of it is case finding. It also goes for support and direct services. A major portion of direct services is case finding.

Senator HILL. I notice that the statute, the Public Health Service Act, Public Law 635 provides that the funds will be used for direct expenses of prevention and case-finding projects. All these funds are to be matched by an equal amount of State and local funds expended for the same purpose; is that correct?

Dr. BLOMQUIST. Yes, sir.

Senator HILL. In other words, the States and local communities have to put up 50 percent of the amounts expended?

Dr. BLOMQUIST. Dollar for dollar.

Senator HILL. Now, there is no doubt that we have made fine progress in the field of TB. We certainly do not want that reverse to occur and for that matter we want to continue this progress. How much did your Division request of the Department? Was it some $7,250,000?

Dr. BLOMQUIST. That is correct.

EFFECTS OF REDUCTIONS IN FUNDS

Senator HILL. You requested $7,250,000. The Department reduced that to $7 million and then the Budget reduced the Department's request from $7 million to $5,386,000. Is that correct?

Dr. BLOMQUIST. That is correct.

Senator HILL. That is quite a reduction. Practically all of those funds were for grants to the States under the Public Health Service Act?

Dr. BLOMQUIST. Yes, sir, $1,500,000 in grants to the States was eliminated by the Bureau of the Budget.

Mr. ACKERMAN. The $250,000 reduction by the Department would have been for studies for services to nonhospitalized tuberculosis patients.

Senator HILL. Of what did those consist?

Dr. BLOMQUIST. We find that in any community about half of the active cases are in hospitals and half outside hospitals. Those persons that are outside of institutions need continued supervision. They need to continue taking drugs.

This is a responsibility that has been added to the health departments. In the past, most of the definitive treatment was the responsibility of institutions. Now, because patients can be released earlier, the responsibility falls on the community and particularly the health department.

ADMINISTRATION OF DRUGS

Senator THYE. Doctor, I have a question at that point.

How are these drugs taken?

Dr. BLOMQUIST. There are a series of drugs. Some of them can be taken by mouth and some taken by injection.

Senator THYE. Which are the most desirable?

Dr. BLOMQUIST. From a practical point of view and ease of administration, we like the oral ones.

Senator THYE. Are they just as effective as an injection?

Dr. BLOMQUIST. Yes. The regimen that is being used throughout the country that has the best results is a combination of two of these drugs, both of them oral. The drugs are isoniazid, which has been mentioned as a potential prophylactic drug, and another drug that we now call PAS.

We also have streptomycin.

Senator THYE. Are they costly to the patient?

Dr. BLOMQUIST. The cost of isoniazid is relatively small.

PAS is a more expensive drug.

While the daily amount is rather inexpensive, the length of time for which they are required makes it a considerable financial expense.

Senator THYE. Do you find it is a problem for the families to finance the drug?

Dr. BLOMQUIST. We find considerable difficulty.

Senator THYE. What can be done there? What do you do if they do not have the means?

Dr. BLOMQUIST. Many hospitals and health departments provide the drug to the individual free of charge.

Senator THYE. That is through welfare agencies?

Dr. BLOMQUIST. There are many combinations. It is more often directly from the health department. They will go to a clinic and see the physician who will prescribe and provide the drug.

There are many areas in the country where this is a problem.

We find that all kinds of methods have been adopted to provide the drugs.

Senator THYE. Are you able to reach the Indians in the same manner?

Dr. BLOMQUIST. The Indians are a special problem; and a special program. That will be taken up later.

Senator THYE. Thank you, sir.

Senator HILL. Senator Ives?

Senator IVES. I am curious as to why this reduction was made. I think you asked a question about it, but I want to know who presented this case to the budget. The reduction of $1,614,000 for whatever purpose it may have been made is a rather serious reduction, and I think you have established a reason why this reduction should not have been made. At least, you have convinced me.

METHOD OF BUDGET PRESENTATION

I would like to know who presented this case to the budget.

Mr. KELLY. In the normal course, Senator Ives, we present a budget document to the Bureau of the Budget similar to the one presented to you and then hearings are held on it. Hearings are held much the same as those held here and the professional staff of the Department appear in support of the estimates.

Then the staff of the Bureau of the Budget analyze it and make their recommendations through the Director to the President.

Senator IVES. Who appeared at those hearings to present the case for the $7 million?

Senator HILL. In other words, did Dr. Blomquist, who presented the case here this morning, appear before the Bureau of the Budget?

Senator IVES. Did you appear before the Bureau?

Dr. BLOMQUIST. I did not appear.

Senator HILL. Who did appear?

Mr. ACKERMAN. There was a formal hearing at which Dr. Price and Dr. Burney appeared.

Senator IVES. Are they as acquainted with this subject as you people are?

I am curious because I think if you made the case with the budget that you have made with us this morning, you might have fared better.

Dr. PRICE. Actually, Senator, I think in the contacts which I had with the Budget Bureau we had a greater opportunity even than we have had with you here today to present this case.

Furthermore, a number of members of the Budget Bureau staff have had rather continuous contact with our programs in an informal way so that I think that they were quite well familiar with the problem.

Senator IVES. Are you perfectly satisfied that this $5,386,000 is sufficient? That is what I am trying to find out.

Your case which you present would indicate that perhaps it is not sufficient. I want to know whether or not it is sufficient.

QUESTION OF SUFFICIENCY OF FUNDS

Dr. PRICE. This question of sufficiency is a very difficult question to answer. We feel that under the amount which has been allowed in the President's budget we can continue to make a very reasonable attack on the disease.

Senator IVES. You may be able to make a reasonable attack but can you make the attack that should be made? That is what I am driving at.

Your testimony does not jibe here. It does not connect up.

In one case you say you need all these things and in the next case you throw it all down. What is right? Can you do the job that you want to do and that you are recommending be done with this amount of money that is being allowed you here?

Dr. PRICE. I think, sir, it is quite apparent, from the testimony which has already been introduced to the effect that the Public Health Service requested a larger amount of funds for this purpose, that we felt that a larger sum was merited by the size of the problem.

Senator IVES. Not only merited but needed, I take it, from what you have said.

Dr. PRICE. I believe so, sir.

Senator IVES. Then this amount that is being allowed you is not enough.

Thank you, Mr. Chairman.

Senator HILL. I am certainly glad you asked the questions you did.

Senator IVES. I am sorry I was so abrupt in the way I went at it. I was trying to get at the truth.

Senator HILL. I think you have made the record perfectly clear. I think you have done an awfully good job.

Is there anything you gentlemen would like to add?

We certainly are very much obliged to you, gentlemen.

Dr. BLOMQUIST. Thank you.

MAINTENANCE OF FEDERAL GRANTS

Senator HILL. I shall include in the hearings 3 letters which I have received pointing out the need for the maintenance of the Federal grant at the level held in the past 3 years, and also pointing out how a reduction would affect the program in particular localities.

(The letters referred to follow:)

NORTH CAROLINA TUBERCULOSIS ASSOCIATION, INC.,
Raleigh, N. C., April 4, 1958.

Hon. LISTER HILL,
Chairman, Appropriations Subcommittee on
Labor-Health, Education, and Welfare,
Washington, D. C.

DEAR SENATOR HILL: The North Carolina Tuberculosis Association has noted with much regret that the administration has requested decreased funds for the tuberculosis program for the fiscal year July 1, 1958, to June 30, 1959. The administration's request for $5,386,000 represents a decrease of $1,614,000 and has been approved by the House.

Those of us who are laboring in the various communities of our State and are close to the problem reject the reason advanced by the administration for its decreased request—that it "reflected the advances made in the control of tuberculosis"—because we are eager not only to hold the advances made but to further our steps toward eradication of the disease.

The proposed reduction would result in a decrease in grants to States in the amount of $1,500,000. In North Carolina it would result in a drastic curtailment of the current case-finding program conducted by the North Carolina State Board of Health because there is very little chance that these funds can be obtained elsewhere.

We also feel that the proposed $114,000 cut from the Public Health Service Direct Operations Budget would seriously curtail the isoniazid prophylaxis research project which is so vital to all of us. These research studies may give us real short cuts to our goal of the eradication of TB. Increased research

activities into the cause and cure of TB must be forthcoming lest we accept the existence of TB to be a needless hazard to be faced by many future generations.

The North Carolina Tuberculosis Association respectfully brings this matter to your attention in the hope that you will use your influence to see that the appropriation for the Tuberculosis Program be increased from $5,386,000 to $7 million to insure that the present level of progress can be maintained.

Respectfully yours,

DR. CHARLES D. EATMAN,
President, North Carolina Tuberculosis Association.

HENNEPIN COUNTY TUBERCULOSIS ASSOCIATION,
Minneapolis, Minn., April 11, 1958.

Hon. LISTER HILL,
United States Senate,
Washington, D. C.

DEAR SENATOR HILL: We have always looked to you for guidance in matters pertaining to the health of our citizens. It has come to our attention that the 1959 budget requests call for drastic cuts in appropriations for the tuberculosis program of the United States Public Health Service. This cannot happen. It is imperative that the proposed cuts be restored to the 1958 appropriation level. This is not only true in the direct operations program but also in the grants to States under the tuberculosis program of the United States Public Health Service.

The tuberculosis control program administered by the Minnesota Department of Health would suffer markedly with a $16,100 cut as proposed in the Federal request. The loss of these funds would affect our statewide case finding and case followup programs. In addition our laboratory service to local health units, hospitals and private physicians would be drastically reduced. The services now provided are minimum and actually should be expanded, not curtailed, to deal with current tuberculosis problems.

We need your help to assure restoration of these funds so vitally needed to continue our State's aggressive program of tuberculosis control.

As to direct operations of the tuberculosis program of the United States Public Health Service, here again expansion, not contraction, is indicated. For example, on February 1, 1958 Minneapolis became a participant in the United States Public Health Service isoniazid prophylaxis research study. We are now one of many communities working in this program which can have great effect on future control activities. This program and other preventive activities of the United States Public Health Service would be hit by any cut in appropriations for direct operations.

We urge restoration of tuberculosis program funds to the 1958 appropriation level. This means $2,500,000 for direct operations and $4,500,000 for Grants to States.

Enclosed for your consideration is an article recently published in the New York Times. As you can see, the cost of tuberculosis control is going up. We look to the United States Public Health Service for continued guidance and leadership in meeting the changing tuberculosis problem. This can only come about by appropriations which are adequate. Continued support at at least the current (1958) level must be forthcoming. We solicit your understanding and wise counsel in these vital deliverations.

Very sincerely yours,

ROBERT D. RAGSDALE,
Executive Secretary.

[The New York Times, January 19, 1958]

COST OF TB IN UNITED STATES STILL RISING

A study made by the United States Public Health Service reveals that the cost of tuberculosis in the United States increased by $100 million between 1952 and 1956, bringing the cost in 1956 to more than $725 million.

The report, based on data from governmental agencies and nongovernmental organizations, is published in the January issue of the American Review of Tuberculosis and Pulmonary Diseases, journal of the National Tuberculosis Association. The authors are Edward T. Blomquist, Chief of the Public Health Service tuberculosis program, and Blanche H. Barbour, statistician with the program.

The total of $725 million, described in the report as "conservative," includes $25 million for psychiatric TB-patients, an item not included in the estimate for 1952.

The principal increase, the report states, was $85 million in hospitalization and rehabilitation costs, bringing the total in this category to $443 million. There was an increase of $22 million in compensation, and of $5 million for such tuberculosis control activities as case finding, public-health nursing, and laboratory services, health education, and training programs. The only significant decrease was $35 million in building construction costs.

The most important factor to be considered in comparing hospitalization costs of 1952 and 1956, the report states, is "the changed nature of tuberculosis control and care."

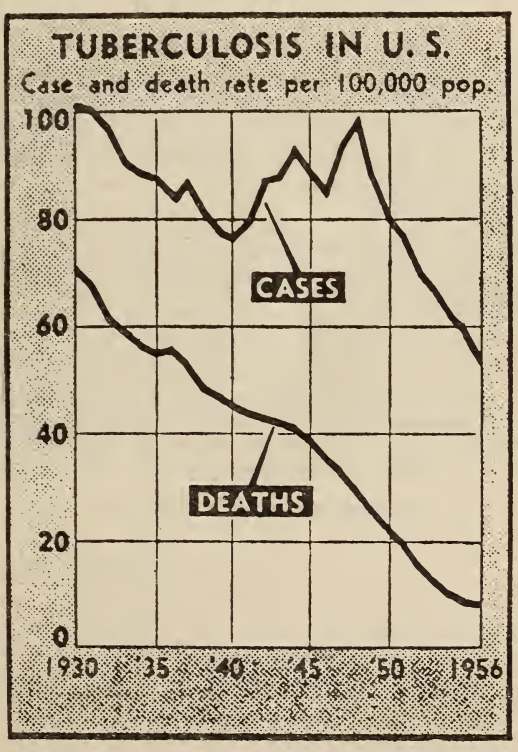
IMPROVED TECHNIQUES

"New drugs and improved surgical techniques," the report points out, "have been so effective that the average number of tuberculosis beds occupied has been reduced. At the same time, the cost of operating tuberculosis hospitals has gone up."

Of the total spent on hospitalization and rehabilitation, the sum of $124 million represented Federal funds; $293 million was spent by State and local governments, and $26 million was contributed by independent organizations.

Compensations to individuals or relatives because of disability or death caused by tuberculosis reached a total of $211 million in 1956, an increase of nearly 12 percent over the 1952 figure of $189 million. The increase, the report asserts, is due primarily to more liberal payments to families needing assistance.

Tuberculosis control items, such as case finding and health education, came to $58 million in 1956. State and local governments spent $29 million of these funds; voluntary health agencies spent $18 million and the Federal Government $11 million. Research and miscellaneous other categories cost more than $13 million.



CROOK COUNTY TUBERCULOSIS AND HEALTH ASSOCIATION,
Prineville, Oreg., April 11, 1958.

Hon. LISTER HILL,
Chairman, Senate Appropriations Subcommittee,
Capitol Building, Washington, D. C.

DEAR SIR: May we ask that you do not support H. R. 11645 regarding the appropriations for the Departments of Labor, Health, Education, and Welfare for the fiscal year 1959.

Our particular interest is the grants-in-aid from the Federal Government to Oregon for tuberculosis control. The tuberculosis control program will be seriously curtailed by a cut of $9,600.

The Oregon Legislature does not meet until January 1959; therefore it will be unable to appropriate funds for the 6-month period from January 1 to July 1, 1959.

We feel that 1959 is definitely not the year to reduce Federal appropriations for tuberculosis programs and strongly urge that you do not vote for the passage of this bill.

Respectfully,

JEAN WILKINSON, *Executive Secretary.*

COMMUNICABLE DISEASE ACTIVITIES

STATEMENT OF DR. ROBERT J. ANDERSON, CHIEF, COMMUNICABLE DISEASE CENTER, ACCOMPANIED BY STEPHEN J. ACKERMAN, FINANCIAL MANAGEMENT OFFICER, BUREAU OF STATE SERVICES; AND JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

Communicable Disease Activities

[Communicable disease:] To carry out, except as otherwise provided for, those provisions of sections 301, 311, and 361 of the Act relating to the prevention and suppression of communicable and preventable diseases, and the interstate transmission and spread thereof, including the purchase, erection, and maintenance of portable buildings; *purchase of not to exceed nine passenger motor vehicles for replacement only;* and hire, maintenance, and operation of aircraft; [$6,250,000] *$6,200,000.*

[Communicable diseases: For an additional amount for "Communicable diseases", for emergency measures necessary for the further prevention and control of a threatened or actual epidemic of influenza, $800,000: *Provided,* That $2,000,000 may be transferred from funds appropriated for diaster relief pursuant to the Act of September 30, 1950, chapter 1125, section 8 (64 Stat. 1109), for the purposes specified in this paragraph, including the purchase, without regard to section 3709 of the Revised Statutes, and distribution of supplies and materials for prevention and control and grants to States of money and medical supplies and materials, upon a finding by the Secretary of Health, Education, and Welfare, upon the recommendation of the Surgeon General and the National Advisory Health Council, that a threatened or actual epidemic of influenza constitutes an actual or potential health emergency of national significance.]

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate (total obligations)	$7,050,000	$6,200,000	$6,200,000

Obligations by activities

	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
Activities:						
1. General disease prevention and control	474	$3,250,000	468	$3,200,000	468	$3,200,000
2. Specific disease prevention and control	316	3,285,000	316	2,485,000	316	2,485,000
3. General epidemic and disaster aid	0	40,000	0	40,000	0	40,000
4. Administration	82	475,000	82	475,000	82	475,000
Total obligations	872	7,050,000	866	6,200,000	866	6,200,000

Obligations by objects

	1958 appropriation	1959 budget estimate	1959 House allowance
Total number of permanent positions	872	866	866
Full-time equivalent of all other positions	49	6	6
Average number of all employees	843	794	794
Number of employees at end of year	834	830	830
01 Personal services	$4,723,200	$4,444,600	$4,444,600
02 Travel	307,300	268,800	268,800
03 Transportation of things	74,000	65,500	65,500
04 Communication services	106,500	90,000	90,000
05 Rents and utility services	101,100	97,100	97,100
06 Printing and reproduction	79,300	28,300	28,300
07 Other contractual services	82,600	73,000	73,000
Services performed by other agencies	25,100	25,100	25,100
Research contracts	593,900	341,900	341,900
08 Supplies and materials	423,300	371,900	371,900
09 Equipment	268,000	132,500	132,500
11 Grants, subsidies, and contributions	192,900	192,500	192,500
13 Refunds, awards, and indemnities	4,300	4,300	4,300
15 Taxes and assessments	28,500	24,500	24,500
Unclassified (general epidemic and disaster aid)	40,000	40,000	40,000
Total obligations	7,050,000	6,200,000	6,200,000

Summary of changes

	Positions	Amount
1958 actual appropriation	872	$6,250,000
1958 supplemental appropriation	0	800,000
Total appropriation	872	7,050,000
Decrease for Atlanta, Ga., outpatient clinic (budgeted in "Hospitals and medical care, Public Health Service," in 1959)	−6	−47,000
1959 base	866	7,003,000
1959 appropriation request	866	6,200,000
Net change requested	0	−803,000

Summary of changes—Continued

	1959 budget estimate	1959 House allowance
Decreases:		
Discontinuance of emergency program for prevention and control of Asian influenza epidemic	$800,000	$800,000
Reduction in other contractual services	3,000	3,000
Reduction in miscellaneous objects to absorb cost of annualization of retirement contributions	5,800	5,800
Absorption of annualization on 56 new positions and the retirement authorized in fiscal year 1958	19,700	19,700
Total decreases	828,500	828,500
Increases for mandatory items:		
Retirement contributions:		
Annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)	5,800	5,800
Annualization on 56 additional positions authorized in 1958	18,700	18,700
Annualization of retirement on 56 new positions	1,000	1,000
Total increases	25,500	25,500
Total change requested	−803,000	−803,000

Prepared Statement

Senator Hill. The communicable-disease activities, Dr. Anderson. Good morning, Doctor. We are glad to have you back with us again. Do you have a prepared statement, Doctor? You are Chief of the Communicable Disease Center at Atlanta, Ga.?

Dr. Anderson. Yes, sir.

Senator Hill. Do you want to file your statement?

Dr. Anderson. Yes; I would like to file the formal statement and read a summary of it.

Senator Hill. All right, Doctor.

(The statement referred to follows:)

Statement of Chief, Communicable Disease Center

Mr. Chairman and members of the committee, the Communicable Disease Center (CDC) operates as a working partner of the States in the control of infectious diseases. Its function is to develop practical tools in the form of knowledge or improved techniques which will enable the States to carry out effective programs of prevention and control. These tools are the tangible results of the center's epidemiological investigations, field studies, and laboratory research; they are made available to State and local health departments through technical assistance and consultative services, through demonstrations, and through the center's training and publications programs.

Infectious diseases and their sequelae are responsible for 130,000 deaths in this country each year—one-tenth of the total number. Figures on the incidence of most communicable diseases are unobtainable, since only a few diseases, selected on the basis of relative urgency for investigative and control measures, are regularly reportable. It is difficult to estimate the total number of school-days and workdays lost each year in this country because of unreportable common diseases. However, surveys conducted by the Armed Forces and by various health agencies show that upper respiratory infections are the main cause of days lost. Next in magnitude are the acute gastrointestinal disorders, and these are followed by all other causes combined.

Although the spectrum of infectious diseases ranges from the inevitably fatal, like rabies, to others that appear to be of relatively minor importance, it is unwise to dismiss even the mildest as inconsequential, since they all affect the national welfare and economy. It is now recognized that a number of chronic diseases stem from earlier infections; for example, permanent damage to the heart or kidneys can result from streptococcal infections. Even the common childhood diseases can have serious consequences. Many people go through life with impaired hearing as an aftermath of measles or whooping cough and

encephalitis and involvement of the reproductive glands are among the complications of mumps.

The degree of activity directed by CDC toward the prevention and control of specific diseases depends on characteristics of the diseases themselves and the need of the States for the type of technical assistance that can be rendered only by a national resource. Some diseases, like influenza and pneumonia, or diarrhea and dysentery, rank high in incidence and as causes of death, and therefore require intensive study directed toward their ultimate control. The battle against poliomyelitis is by no means won, although the incidence decreased greatly last year with a particularly striking drop in the attack rate of paralytic polio among vaccinated individuals. The CDC contribution to PHS activities on polio vaccine is in the area of seeking to determine the degree and duration of immunity produced by the present vaccine. We are also studying attenuated live viruses to see if they may afford greater protection with no risk of reversion to its original virulence.

Disease problems

While many of the bacterial diseases have yielded to chemotherapeutic agents and antibiotics, other problems have emerged. For example, certain strains of bacteria have developed resistance to these drugs. Staphylococcal infections which defy all currently available antibiotics are plaguing hospital surgical wards and nurseries for newborn infants all over the world. As a result of requests for assistance from hospitals in this country, CDC is investigating the problem and has succeeded in identifying some of the troublesome strains. Isolation and identification of these bacteria are prerequisities to studies on control. Among the viral diseases, aseptic meningitis, rabies, viral hepatitis, encephalitis, and viral respiratory infections, are commanding special attention at the center. Of more than 50 recognized viral diseases, only 5 or 6 are preventable and only a few can be treated effectively. Recently 80 new viruses that affect humans have been identified and some of these produce disease conditions that cannot be distinguished clinically from those caused by other pathogens. In addition, the parasitic diseases, such as toxoplasmosis and the systemic mycotic diseases—histoplasmosis, coccidioidomycosis, and blastomycosis—are far more common than was previously suspected. With the rapid development of water resources and the attendant increase in mosquito-breeding sites, the potential of mosquito-borne diseases is accentuated. Many species of mosquitoes and other insect vectors in this country and throughout the world have developed resistance to insecticides that were formely effective. In the search for other effective insecticides, newer compounds are constantly being developed, and these are carefully studied by CDC for their toxicity to humans and animals. Problems such as these spur our quest for knowledge and techniques upon which to base practical control measures.

The incidence of some diseases—diphtheria, endemic typhus, and typhoid fever, for example—is diminishing, but serious outbreaks still occur and make it evident that the center must stimulate the use of preventive tools and control measures that are already available to hasten their eradication.

Yellow fever, plague, smallpox, malaria, and cholera are now rare in this country, although a death from plague occurred in 1956 in California and another resulted from a case contracted in Colorado, in 1957. Epidemics of all these diseases have been reported from other parts of the world during the past year. As long as the organisms responsible for these diseases persist anywhere in the world, competence in dealing with them must be maintained by CDC in order to insure their continued minor status here.

ASSISTANCE TO THE STATES

Defining disease problems

In order to define the nature and extent of the problems with which it must cope, CDC carries out extensive investigations on the communicable diseases and on the toxicity of insecticides used to control the arthropod vectors of disease. Epidemiologic studies provide valuable information regarding the incidence of various diseases, reservoirs of infection, methods of transmission, and indications for preventive measures. Detailed information on the status of important communicable diseases is made available to the States through CDC's special reports and through regularly issued surveillance reports.

Since knowledge of the natural history of pathogens and the means by which they are transmitted to man help define the problem and may provide some clue

as to methods of control, these are also investigated by CDC. In many diseases, the role played by animals, insects, and environmental factors must be explored and assessed.

The development of new diagnostic methods and the simplification of old ones used in the identification and characterization of disease agents are important items on the center's list of activities. The value of this activity is increasingly evident, since it is now known that many different pathogens sometimes cause clinically similar diseases, and since prophylactic and therapeutic measures that are effective against one organism may be worthless against others that produce misleadingly similar conditions. The poliolike diseases achieved prominence during CDC's evaluation of the effectiveness of the polio vaccine, when specimens from thousands of cases clinically diagnosed as polio failed to yield polio virus. Other viral agents, particularly members of the Coxsackie, ECHO, and Buffalo groups, were recovered instead, and were subsequently proved capable of producing an aseptic meningitis indistinguishable clinically from nonparalytic polio. Obviously, the polio vaccine has no preventive or palliative effect on poliolike diseases which are caused by other agents.

Epidemiologic investigations of early outbreaks of Asian influenza in this country made it possible to chart the course of the disease, predict its trend, and plan the attack against it. Isolation and identification of the influenza virus A mutation responsible for the disease was accomplished through advanced laboratory diagnostic methods and enabled CDC to contribute to the development of an effective vaccine and to stimulate its widespread use.

The Communicable Disease Center functions to provide the States with better epidemiologic and laboratory diagnostic tools and techniques. These involve the development and evaluation of screening techniques, which are incorporated into CDC training courses and demonstration projects, and one of the most rewarding facets of the center program—the development and evaluation of rapid and practical laboratory diagnostic techniques.

Improved diagnostic methods

The benefits to be derived from such techniques were demonstrated when tissue culture methods made it possible to cut the time required for diagnosing poliomyelitis to 1 week, as compared to 8 weeks when the monkey-inoculation test was used, and reduced the cost per test from $200 to $10. By combining the tissue-culture method with the fluorescent-antibody technique developed in CDC, the time was further reduced to 1 day and the cost to $5 per test for materials. Fluorescein-tagged-antibody techniques have now been applied by the center to 8 bacteria, 3 protozoa, 4 viruses, including the strain responsible for Asian influenza, and 1 Rickettsia of public health importance, and the time required for laboratory identification of some bacteria has been cut from 5 days to 30 minutes and for certain viruses from 7 days or more to 1 day or less. Efforts are under way to modify and simplify this method, to extend its application to a wide variety of pathogens of public health importance, and so make it a practical tool for State laboratory use. Members of the Center's staff are now testing this technique under ordinary operating conditions. The use of rapid diagnostic methods enables the States to institute preventive and control programs more promptly and thereby save lives that might otherwise be lost. Great savings in laboratory costs and time are also accomplished.

Diagnostic aid to States

Although the States are performing an increasing number of their own diagnostic procedures, over 29,000 specimens were sent to CDC for diagnostic purposes last year. Most of these specimens presented problems that were beyond the State resources to solve, requiring highly advanced techniques or diagnostic materials that could not be obtained on the open market. During 1957, CDC produced 1,000 different diagnostic reagents, comprising 600 sera for identification of bacteria, 100 sera for identification of viruses, and 300 antigens and other reagents (viral, bacterial, mycotic, and parasitic). Only 30 reagents used by laboratories in the United States are available commercially, and it is unlikely that commercial concerns would ever find it profitable to make the remainder of the 1,000, since the utmost care makes production costly and only limited quantities are needed. Yet they are necessary for research and disease control purposes and CDC is therefore supplying State and local health departments with diagnostic reagents when commercial products are unobtainable or unsatisfactory. This necessitates a continuing program of evaluation and improvement of reagents for potency, specificity, and stability.

Preventive activities

State and local health personnel are responsible for the administration of preventive activities involving immunization, prophylaxis, environmental control, vector control, and health education. In order to place better methods at their disposal, the Center investigates vaccines and methods of administering them, and conducts studies on disease control, vector control, and the toxicology of insecticides.

The Asian influenza epidemic afforded an unique opportunity for the Center to carry out immunological studies in the face of an impending nationwide emergency. Before the epidemic had time to become firmly established, the Center assisted and encouraged pharmaceutical houses in formulating monovalent vaccines against the particular virus strain responsible for the outbreak, evaluated vaccines as they were produced, and experimented with various vaccination procedures in order to determine the amount and number of dosages required and the optimum time interval between inoculations. Since the Asian strain was new to this country, the population had no natural immunity to it. Serology studies were set up on selected groups of individuals before and after vaccination, so that the circulating antibody level produced by vaccine could be correlated with resistance to clinical illness. Immunization and prophylactic measures against other diseases are also being assessed.

For some communicable diseases, treatment is the method of control. For example, the mycotic and parasitic diseases are among the least amenable to treatment. The CDC has developed leads which indicate that Amphoterricin B, a new antibiotic, may be effective in treating histoplasmosis, a disease sometimes highly refractory to treatment. This may provide an effective tool to control the late manifestations of this disease.

Environmental studies were directed largely against the diarrheal diseases, and it was confirmed that the incidence of these diseases in a given community was in inverse ratio to the availability of sanitary facilities.

Insecticides and insect resistance

Increased mosquito populations associated with the growth of irrigation and other projects has stimulated CDC's efforts to develop effective control measures, since many species are vectors of important diseases, such as encephalitis. The mechanisms by which insects become resistant to insecticides are being studied, so that means can be sought to overcome this phenomenon. At present, approximately 3 billion pounds of pesticides are used in the United States each year. Health hazards created by exposure of body surfaces to these toxic substances, or by their inhalation or ingestion are evaluated at CDC, and studies are directed toward developing usage precautions and antidotes against pesticide poisoning.

Epidemic and disaster aid

Epidemic aid and disaster aid are important means by which CDC renders preventive assistance to the States. This past year, CDC supplemented State health resources in 30 emergencies in 19 States. The floods in Texas, Oklahoma, Louisiana, and Arkansas during April through June called for the largest disaster activity in which the Center has ever participated.

In order to carry out this broad scale attack on infectious diseases from the public health standpoint, a budget of $6,200,000 is requested for fiscal year 1959. This is $850,000 below the 1958 level. The difference primarily relates to the elimination from the 1959 estimate of the funds appropriated in 1958 for the emergency program of influenza prevention and control.

General Statement

Dr. Anderson. Safeguarding the Nation's health calls for continuing vigilance and aggressive action against the communicable diseases. These diseases and their sequelae cause one-tenth of the deaths in this country each year. They cut deeply into the productivity of our population and continually oppose our well-being. Our rapidly growing young population, upon whom the Nation's future depends, is particularly at risk from the infectious diseases. Furthermore, many disabling chronic diseases that burden later life stem from earlier episodes of communicable disease.

WORK AT COMMUNICABLE DISEASE CENTER

The Communicable Disease Center works to develop, improve, and make available to the States practical tools for prevention and control of communicable diseases.

In order to define the nature and extent of disease problems and to find better means for control, the Center studies the epidemiology of diseases—where and under what circumstances they occur, and how much infection and illness and death they cause. About some diseases enough is known so that effective preventive measures can be taken, and the CDC works to improve these and to stimulate their use. About those diseases which are not yet sufficiently understood so that public health can act to prevent them, the CDC seeks bases for action through laboratory and field investigations of the causative organisms, their behavior in nature, and their effects on man.

The variety of the communicable diseases calls for a variety of preventive approaches. For instance, if animal species other than man are the natural hosts of a pathogen, control of the disease it causes in man may mean control of the disease in animals—as in rabies, psittacosis, and ringworm. Or it may mean interruption of its transmission to man, as in staphylococcal and streptococcal infections, Q fever, and diseases which are prevented by the pasteurization of milk. Or vaccination of the human population may be the preventive measure, as in polio, tetanus, and anthrax. Control of diseases carried by mosquitoes calls for extensive efforts against the offending species—efforts that have had to be stepped up where the development of water-resources is creating widespread mosquito breeding sites. And insect vector control itself brings with it new problems of insects resistant to some chemicals and of hazards to human health in the use of insecticides. On all of these problems, the CDC is constantly at work.

Many diseases caused by totally different organisms present a clinical picture so similar that diagnosis can be made only through laboratory study. Since control of these diseases depends upon their identification, accurate laboratory diagnosis is increasingly recognized as essential—a fact that is reflected in the volume and nature of specimens sent to State and CDC laboratories for study.

METHODOLOGY RESEARCH

In an effort to improve the accuracy, economy, and rapidity of laboratory diagnostic work, the CDC carries on continual methodology research. Scientists at the center are now working, for instance, to adapt the fluorescent antibody technique, that you have heard discussed here this morning to the identification of a wide variety of diseases.

Senator HILL. Tell us about that, if you will.

Dr. ANDERSON. To me this is one of the most exciting things in the control of communicable diseases. It is so exciting that I would like to take a few minutes to share my excitement with you.

In the control of infectious and communicable diseases, the detection of the offending organism is essential first in the epidemiology of the disease. It is essential in the research as to how that organism affects man and also essential in diagnosis so that early treatment can result.

I have prepared a brochure here, Mr. Chairman, and members of the committee, which I believe will illustrate some of the points that I would like to make about the technique.

Senator HILL. All right, sir.

Dr. ANDERSON. If you will open the page, unfold the document, on the left-hand leaf, for three important diseases you see the amount of time that is involved for the determination of whether or not the causative organisms are present.

Group A, streptococcus is the infectious disease organism that causes rheumatic fever, some nephritis cases, causes infections of the skin, and may cause bronchial pneumonia.

Present techniques require at least 3 days to identify this organism.

The second organism is the plague bacillus. This is the bacillus that caused the black death plague in the Middle Ages.

Presently used techniques require 3 days for the identification of this organism.

Anthrax bacillus is the organism that causes a disease in cattle and is also a disease that affects certain humans, particularly those who are working in the fur and woolen industries.

Present techniques there also require about 3 days.

Now, the center sheet shows that by using the fluorescent antibody technique these diseases can be diagnosed—the presence of these organisms can be detected—in 1 to 3 hours. The pictures of what the organisms look like under the microscope, using this technique, are attached thereto.

The second of the pictures is a photomicrograph of a lymph gland from a case of plague. This is from a man in California who died of plague in 1956.

The bottom photograph shows the anthrax rods sharply in material from a person who died in New Hampshire of anthrax, a worker in one of the woolen mills up there.

Presently we have developed the fluorescent antibody technique for the organisms that you see at the top of the right-hand page. One that is extremely exciting, I think, is the rabies work.

IMPROVEMENT IN TECHNIQUE OF RABIES TREATMENT

You are probably all familiar with the fact that when a child is bitten by a dog, the dog has to be caught and held for 10 days to see whether or not the dog becomes ill. If the dog becomes ill and dies, the brain then is examined to determine whether or not there is evidence of rabies virus present. Sometimes the dogs are shot, however, before the 10 days have elapsed.

An angry parent or neighbor shoots the dog then the dog never has a chance to develop the symptoms of rabies.

Senator HILL. Then if you make an examination, you might not find rabies even though the rabies were there?

Dr. ANDERSON. That is correct. With the present techniques the decision might be a very difficult one to make. This technique in the laboratory as we are working with it enables the detection of just a few virus particles before they have caused extensive changes in the brain. Therefore, if this technique is employed it will make the decision about giving vaccine to those persons who need it immediately

apparent. Those persons who do not need vaccination will be spared a long and painful process.

Senator THYE. Doctor, do you need more research?

Dr. ANDERSON. Yes, sir.

Senator THYE. Are you getting enough money to do the research necessary?

Dr. ANDERSON. We have put every single person that we have presently on our staff that we can assign to this purpose.

Senator THYE. Rabies has been spreading in the Central West, the Central States like Iowa, Minnesota, Wisconsin. Rabies has spread. I had a conference with the livestock veterinarians as well as health officials out in the State in the winter because of the threat of rabies in that area. There are several new cases where they had diagnosed the skunk and the skunk had been in a fight with a dog and therefore you knew that there was a possibility of an infection.

It is very serious, Doctor. That is why I asked the question as to whether or not you are getting enough money to do the necessary research to develop this program as it should be developed.

You have had numbers of persons who have had to have the rabies injection as you had it in that college last winter in Florida.

(The following information was later supplied at the request of the subcommittee:)

DATA ON OBLIGATIONS AND ESTIMATES FOR RABIES ACTIVITIES

The sums tablulated below represent obligations and estimates for rabies only, separated from the totals of all animal-borne disease activities. They reflect actual obligations for fiscal year 1957, estimated costs of the rabies program for fiscal year 1958, plans (April 1958) for fiscal year 1959 program obligations under the 1959 House allowance.

	Positions	Total amount	Program changes
Fiscal year 1957	22	$161,400	Accentuation of studies in the Southwest on bat rabies. Establishment of field station at Las Cruces, N. Mex. Increased work on rabies control demonstrations, training, and consultative assistance to State and local health departments.
Fiscal year 1958	27	250,000	
Fiscal year 1959	31	250,100	The CDC field station at Newton, Ga., closed. In process of being moved to Alabama where Communicable Disease Center and State resources will combine to enable the program to function more effectively. The small saving in rabies funds concurrent with the shift will be used to develop other animal-borne disease programs.

Because of the 1958 Senate allowance of $50,000 over the House allowance the total increase request for fiscal year 1959 approved by the PHS was $950,000 instead of $1 million. Under present program plans, in applying $950,000 increase, $75,000 of the increase still would be requested for rabies work.

the $50,000 increase allocated for rabies in fiscal year 1958 was used for bat rabies investigations in Southwestern United States. The plan for fiscal year 1959 were $75,000 to be restored includes broadening the program for the testing of improved vaccination techniques for prevention of rabies in man, intensifying the present wildlife reservoir and epidemiological studies in Southeastern United States and New York State, and the inauguration of similar studies in the highly endemic skunk rabies area of the upper Mississippi and Missouri Valley area of the Midwest. This will afford minimum investigation and support control services as a basis for organizing future cooperative regional laboratories in these problem areas.

FUNDS REQUESTED

Senator HILL. I think in that connection, Senator, I might call attention to the fact that the budget estimate is $950,000, is it not, under what you requested, Doctor?

Dr. ANDERSON. Yes, sir. That decrease represents the emergency influenza program principally.

Mr. ACKERMAN. Actually, the influenza funds were deducted as nonrecurring. In the original budget request to the Department there was an additional increase of $950,000 requested which was cut out.

Senator HILL. You requested $7,200,000 of the Department and the Department reduced that to $6,250,000. Is that right?

Mr. ACKERMAN. Yes, sir.

Dr. ANDERSON. I thought you were referring to the other.

Senator HILL. I appreciate that, Doctor. You were reduced, $950,000.

Dr. ANDERSON. Yes, sir.

Senator HILL. For what purpose did you request the $950,000?

Dr. ANDERSON. Some of it was for the work on the fluorescent antibody techniques.

Senator HILL. How much was for that?

STAPHYLOCOCCUS PROBLEM

Dr. ANDERSON. That was $260,000. Some was for work on the staphylococcus problem that Dr. Burney mentioned was growing in the hospitals over the country.

Senator HILL. That problem is getting more acute all the time, is it not?

Dr. ANDERSON. Yes, sir, it is of increasing concern to hospital administrators. We have been out on a number of outbreaks in widely separated parts of the country, Wisconsin, Nebraska, Texas, New Jersey, South Carolina, Washington State. They have had it in many parts of the country.

It is of great concern to hospital administrators and physicians working in hospitals as well as to patients who go into hospitals.

Senator HILL. You find that it spreads in particular areas and becomes acute in particular areas?

Dr. ANDERSON. Yes, sir, it could occur in any hospital. It has occurred in the big city hospitals, the public hospitals, and it has also occurred in small private hospitals.

It is caused by an organism that is commonly present in the environment but under certain conditions it spreads from mother to infant, from infant to infant, from doctor to patient, or nurse to patient. Surgical patients particularly are affected by this problem.

In addition to those things that we wished to increase we also wished to increase our work on some of the mosquito-borne diseases and the problems associated with them as well as to increase our respiratory diseases work and our rabies work which Senator Thye mentioned.

FLUORESCENT ANTIBODY TECHNIQUE IN RABIES

Senator HILL. Now, do you mean in addition to the work on the fluorescent antibody technique work in connection with rabies?

Dr. ANDERSON. Yes; the fluorescent antibody technique relates to the detection of rabies but we are interested in working on control,

preventing the spread of rabies from the fox populations on the east coast. The skunk is the problem in the Midwest, the fox in the East and the bat in the Southwest and West. These seem to be the animal reservoirs of rabies from which the virus gains entry to the dog populations even though the dog populations are repeatedly vaccinated.

I was in El Paso last week. They are conducting a massive dog vaccination program there but the bats represent a continuing threat whereby the virus can be reintroduced into the dog populations.

Our studies which you expanded last year in the Southwest on rabies are aimed at finding out how the virus moves from the bat to the dog.

We are not working on skunks.

Senator HILL. What sort of progress have you made in those studies?

Dr. ANDERSON. We have devised a means of trapping bats. A bat is difficult to catch. Our staff had to devise a trap to catch bats and the way we did it was by using a grid of very fine wires which the antenna of a bat cannot detect. He will fly into it expecting it to be an open space; his wings get caught on the wires and he slides down into a bag. We can then examine these bats for rabies virus in their bodies.

We are finding that something like 15 percent of the bats in New Mexico are infected. Now we are trying to find out what other wild animals in that area can be infected through the biting of the bat. We are developing some animal quarters and will put bats into these to see what animals the bats will bite and what happens to the virus in those animals.

Senator HILL. How much do you have in the way of funds in this budget now compared to what you had in the present year for this bat study?

Dr. ANDERSON. In our regularly submitted 1959 budget the amount for rabies would be the same as we have for 1958.

EFFECT OF DENIAL OF FUNDS

Senator HILL. But if you had got the additional $950,000 part of that would have gone for additional research in this matter of the bat and the rabies?

Dr. ANDERSON. Yes, sir. It would have gone for the examination of the skunk problem in the Mississippi Valley area.

We are not working on the skunk problem in the Mississippi Valley at all at the present time.

Senator HILL. Do you mean you do not have the funds with which to do that job?

Dr. ANDERSON. That is correct, sir. The budgeted funds did not provide for that.

Senator HILL. Your $950,000, if you had it, would furnish the money to do this work in the Mississippi Valley?

Dr. ANDERSON. Yes, sir.

Senator HILL. Doctor, I wish you would supply for the record at the conclusion of your testimony a full, complete, and detailed statement of just exactly why you asked for this additional amount of $950,000 and how the $950,000 would be expended if you had it. Give us a breakdown so that we know.

Dr. ANDERSON. Yes, sir. I will be glad to do so.

(The material referred to follows:)

EXPLANATION OF DIFFERENCE BETWEEN ORIGINAL 1959 BUDGET REQUEST OF THE DEPARTMENT AND FINAL BUDGET REQUEST

Summary of major elements of increase proposed and disallowed

Bacterial disease investigations, staphylococcal infections	+$50,000
Laboratory diagnostic techniques, fluorescent antibody technique and diagnostic reagents	+410,000
Disease-vector investigations and demonstrations	+170,000
Investigations on economic poisons	+70,000
Poliolike and other virus diseases, respiratory viruses and hepatitis	+175,000
Rabies	+75,000
Total net difference between original request and final request	950,000

DETAILED EXPLANATION BY ELEMENT OF INCREASE

Bacterial disease investigations

1958:	
Positions	10
Amount	$87,500
1959:	
Positions	17
Amount	$137,500
Increase:	
Positions	7
Amount	$50,000

Staphylococcal infections have caused particularly difficult problems in an increasing number of hospitals throughout the country, being associated with outbreaks of impetigo in premature and newborn nurseries, serious abscesses in both infants and mothers, and severe postoperative wound infections following major and minor surgery. Antibiotic-resistant strains have made treatment and control extremely difficult, often forcing temporary closing of nurseries. Concurrent infections of staphylococcus and influenza virus have caused epidemics of fulminating fatal pneumonia, resistant to all known treatment. Equally important are the serious and lasting sequelae associated with the streptococcal infections—scarlet fever, streptococcic sore throat, acute rheumatic fever, rheumatic heart disease, permanent kidney damage, and the permanent tissue damage resulting from osteomyelitis.

The estimate provided for two multiprofessional teams for studies on the frequency, geographic intensity, and modes of spread and control of these infections. These would include epidemiologists, nurses, and bacteriologists, placed in carefully selected areas. The medical officers would review clinical cases, nursing techniques would be surveyed and instructions provided in the most modern methods; and prompt typing and drug resistance tests made. Thus, within a short time, thorough review of local situations could be made, the problems defined, and corrective measures recommended. Intensive investigations of outbreaks would become research studies while simultaneously providing epidemic aid. By discovering the causes leading to outbreaks, broad recommendations may be made to hospitals for modifying their facilities, new drugs may be tested, and corrective and preventive measures may be initiated. Results of these studies, and recommendations for improvements, would be made available for assistance to State and local health departments.

Laboratory diagnostic techniques

1958:	
Positions	60
Amount	$418,300
1959:	
Positions	94
Amount	$828,300
Increase:	
Positions	38
Amount	$410,000

This item would have provided more adequately for (1) more rapid development of the fluorescent antibody diagnostic techniques, (20) positions and $260,000), (2) the preparation and standardization of diagnostic reagents, (18 positions, $150,000).

Specific and rapid identification of disease-causing organisms is of paramount importance in the diagnosis, proper treatment, prevention, and control of communicable diseases. Conventional methods now employed in most diagnostic laboratories, both clinical and public health, for the identification of many of the pathogenic organisms are often time-consuming (requiring days and even weeks for final identification), complicated (sometimes necessitating highly trained, professional personnel for their performance), expensive and not always effective.

Recent studies at the Communicable Disease Center have resulted in the application of new technique which permits the rapid specific identification of certain pathogenic organisms, even when they are present in small numbers, in clinical and research materials. The procedure, known as the fluorescent antibody technique, offers a most promising approach to the laboratory detection and identification of a wide variety of pathogenic organisms. The procedure has potential application in the everyday requirements of both hospital and public health laboratories and would be of a great significance in the study and control of epidemics and in civil defense activities in connection with suspected or actual biological warfare attacks.

In the studies at the Communicable Disease Center, this technique has been tested and evaluated on a pilot basis with only a few kinds of pathogenic bacteria, selected because of their potential utilization as biological warfare agents. Basic procedures have been developed, necessary reagents and materials have been prepared, modifications of the technique have been made to broaden its application, and experience has been gained in its use. Results obtained by other investigators in this country and abroad have been reviewed and analyzed.

Information obtained to date from investigations at the Communicable Disease Center and elsewhere indicates the potential application of the fluorescent-antibody technique to a wide variety of infective agents, including bacteria, fungi, protozoa, viruses, and rickettsiae. It has also become apparent, however, that detailed study is required of each specific antigen-antibody system for which the technique is proposed. Further, before the technique is put into general use in public-health and other laboratories throughout the country, laboratory personnel will have to be trained in its performance, the laboratories will have to obtain necessary optical equipment, and adequate quantities of specific reagents will have to be made available.

Under the funds requested in this item, the Communicable Disease Center proposed to:

(1) Broaden its own applied-research program to extend the application of the fluorescent-antibody technique to the diagnosis of a large variety of infectious diseases, including tuberculosis, diphtheria, meningitis, brucellosis, tularemia, streptococcal infections, systemic fungus infections, and certain of the viral and rickettsial infections.

(2) Provide training and experience to laboratory personnel throughout the country, by presenting courses, both at the Communicable Disease Center and in the field, by developing and preparing training materials, and by providing technical assistance and consultation to the laboratories employing the technique.

(3) Make available the developed reagents, particularly labeled globulins, for use by State health-department laboratories.

The fluorescent-antibody work illustrates that diagnostic procedures cannot be undertaken without necessary and suitable reagents. The usual diagnostic reagents, and many of those commonly used, are not available commercially. The Communicable Disease Center has undertaken the preparation of certain of the reagents which are either not available commercially or only sporadically available. To date, 13 different kinds of materials, comprising 41 separate items, have been made available to State laboratories. An additional 40 items are distributed by special arrangement.

Although the Communicable Disease Center has undertaken the preparation of a number of these reagents, there are no standards in this country or in the world available as guides for their production or utilization. An adequate program would develop standards of production and reactivity to assure reasonable reproducibility of results within one laboratory and from laboratory to laboratory. The reliability of some of the available reagents and the techniques utilizing these reagents is almost complete unknown. Thus protracted and intensive

studies were considered necessary to demonstrate deficiencies, such as have been recently discovered at the Communicable Disease Center, in reagents and methods of testing for Rocky Mountain spotted fever, psittacosis, amebiasis, and toxoplasmosis. A program was proposed for restudying and evaluating every diagnostic procedure and reagent used, in order to determine deficiencies and undertake the necessary investigations in methodology to correct these deficiencies and for work in connection with the diagnosis of a number of the communicable diseases to increase the capacities of State public-health laboratories as to the number of kinds of tests which can be made. It also would provide them with reagents and newer techniques to improve their diagnostic accuracy.

Disease-vector investigations and demonstrations

1958:	
Positions	91
Amount	$580,400
1959:	
Positions	114
Amount	$750,400
Increase:	
Positions	23
Amount	$170,000

The abatement of insect and rodent disease vectors is necessary in effective programs for the control of communicable diseases. Enteric infections, murine typhus, and arthropod-borne encephalitides are among the infections which can be suppressed through effective community programs for vector control. Efforts are directed against houseflies, ectoparasites of rodents, mosquitoes, and other arthropods which affect public health. Increased knowledge of the relationship of vectors to disease and means for their control, and the continual rise in living standards, have led to an unprecedented growth in interest in vector-abatement programs. Such rapid and widespread development of new programs and expansion of existing ones create many technical problems. The objectives of this program are to bring advanced research knowledge on disease-vector control to State and local health departments, guide them in its practical application, and assist them with the solution of newly encountered technical problems.

To meet major vector-control needs, the Communicable Disease Center conducts a number of varied activities. These activities involve research and dissemination of information on the safe handling of insecticides and other toxic materials, the development of new equipment, the evaluation of existing equipment for vector control, and studies on the ecology of disease vectors. Pesticides and related materials are evaluated, and recommendations for their effective and safe use are issued. Demonstrations and consultative services are provided to State and local health departments and to other Federal agencies concerned with disease-vector problems.

Community vector-control demonstration projects are conducted jointly by the Communicable Disease Center, public-health offices, and the State and local health agencies concerned in four locations within the United States. These demonstrate new and improved methods which can be applied on a communitywide basis to prevent and control the production of flies, rodents, mosquitoes, and other vectors and animal reservoirs of disease. Primary emphasis is placed upon securing permanent improvements in environmental sanitation practices, including proper refuse storage, collection, and disposal; the elimination of animal pens; and, where possible, the promotion of household sanitary facilities connected to sewers, with concurrent privy elimination. Plans for 1959 included the establishment of an additional demonstration project.

The rapid acceleration of the water resources development activities in the United States has been accompanied by great increase in population of mosquitoes and other disease vectors of public-health importance. Over 3 million acres of mosquito-breeding area are associated with the 30 million acres of irrigated land in the West. Federal water resources development projects now approved provide for expenditures of over $18 billion, and projects contemplated call for an additional $52 billion. The center is providing limited consultative assistance continuously in answer to many requests by State and local health departments and irrigation district authorities. The center also is cooperating with the Interagency Committee on Water Resources by providing investigative and consultative services for preventing the creation of mosquito-breeding hazards and to eliminate those now existing. Thus far, the center has provided (1) integration of vector-control plans for several hundred Federal water re-

sources development projects; (2) basic data on the bionomics of prevalent mosquitoes; (3) cooperative studies with the Agricultural Research Service to develop improved irrigation practices for mosquito-breeding prevention; and (4) field evaluation of residual larviciding and other chemical mosquito-control measures. Additional consultative services for other Federal, State, and local agencies on vector problems arising from water-resources developments were proposed.

The most critical problem in the field of chemical control of disease vectors today is resistance of insects to many of the pesticides in general use. Each year since 1947, when the common housefly was first reported as resistant to DDT in Italy, the list of arthropods resistant to one or several of the chlorinated hydrocarbon compounds has grown, until in 1956, it included 40 species, 22 of which are vectors of public-health importance. In 1956, houseflies in Denmark became resistant to Diazinon, an organic phosphorus insecticide, and the resolution of the resistance problem continues to elude research workers.

Since 1948, the Communicable Disease Center has conducted limited studies on the resistance of insects to chemicals. These have been confined largely to the housefly, with some studies on lice and mosquitoes. The resistance problem continues to include new species more rapidly and with greater intensity than the current progress of research can cope with it. In order to keep pace with this ever-growing problem, it was felt that the research program should be accelerated sharply to provide adequate (*a*) detection, measurement, and evaluation of the importance of resistance; (*b*) fundamental studies on the determination of resistance mechanisms; and (*c*) the development of remedial measures. The proposed expanded investigations on the development of adequate procedures for the detection and evaluation of resistance were to enable the Communicable Disease Center to supply State and local health departments, international health agencies, pest-control operators, mosquito-abatement districts, and foreign governments with information on these topics, and provide operational programs with a tool for guiding the selection of chemical measures.

Investigations on economic poisons

1958:	
Position	51
Amount	$341,800
1959:	
Position	60
Amount	$411,800
Increase:	
Position	9
Amount	$70,000

This item provided for augmented investigations on the health hazards associated with the use of economic poisons, particularly the newer organic pesticides, both from the standpoint of the operator who applies the material and of the general public who may be exposed either by coming in direct contact with the pesticides during or after their application, or by consuming food containing residues of such materials. The term "pesticides" includes insecticides, fungicides, herbicides (weed killers), and rodenticides.

Within the past decade, at least 35 major pesticidal compounds not previously available commercially, as well as many lesser ones, have been introduced and accepted widely in agricultural or public-health pest-control operations. Practically every phase of the human environment is affected by these chemicals—food, clothing, shelter, work areas, and recreational areas. An estimated 300 million pounds of the new insecticides introduced in the past decade now are being used annually. The use of new organic chemicals as weed killers and defoliants approaches 100 million pounds annually. The annual consumption of fumigants for stored grain is approximately 50 million pounds.

Practically all of the newer pesticides are complicated organic compounds, whereas most of the older ones were relatively simple inorganic chemicals. The great store of knowledge on the chemistry of the inorganic materials and the availability of specific analytical techniques made the task of toxicologic studies on the older pesticides much simpler than on the new ones. The development of suitable analytical techniques to detect the presence of most of the newer pesticides and their degradation products in plant or animal tissue is a very difficult task, yet such techniques are absolutely essential to adequate toxicologic studies. The synthetic chlorinated hydrocarbons, such as DDT and BHC, and the organic phosphorus compounds, such as TEPP and parathion, include most

of the newer insecticides. The newer synthetic organic fungicides and the weed killers, defoliants, and plant hormones embrace a wide variety of synthetic organic compounds as well as inorganic chemicals.

The problem has been and is growing much too rapidly for the center's present research program to keep abreast of developments. The proposed increase in fiscal year 1958 would permit some much needed expansion, but it was not considered to be sufficient to enable the Communicable Disease Center to meet its responsibilities adequately.

The increase in this estimate provided for further expansion of laboratory and field studies. It included laboratory research on the toxicology, chemistry, physiologic, and pathologic aspects; field investigations to measure the exposure of operators applying these materials; clinical studies of cases, occupational groups, and volunteers; and current information and recommendations to health agencies by means of clinical and chemical memorandums.

Specific disease prevention and control	$250,000

Poliolike and other virus diseases

1958:	
Positions	85
Amount	$835,900
1959:	
Positions	109
Amount	$1,010,900
Increase:	
Positions	24
Amount	$175,000

Even though the incidence of paralytic poliomyelitis was expected to be reduced in fiscal year 1959, it was recommended that nationwide surveillance of the safety and continued effectiveness of the Salk vaccine continue. The nonparalytic forms of polio and the many poliolike diseases were expected to continue in substantial numbers. Measures taken to prevent polio are not known to have any effect in preventing the poliolike diseases. Field and laboratory studies on outbreaks of Coxsackie and ECHO virus infections were proposed to provide basic background and descriptive epidemiologic knowledge to learn the modes of spread and to develop means for control of these infections. Laboratory studies for definite diagnosis of the poliolike diseases, and individual identification of the increasing numbers of pathogenic virus agents being recognized, were to be extended. It was expected that by fiscal year 1959 vaccines for some Coxsackie and ECHO viruses would be in experimental production, and provision thus was made for small-scale field-trial studies.

The adenoviruses and influenza viruses already are being widely studied. The magnitude of the problems of these diseases is one which demands the application of all of the scientific and technical knowledge which can be applied toward their solution. These diseases affect almost every individual in the Nation annually, and directly cause a tremendous economic loss. It was proposed that in fiscal year 1959 the Communicable Disease Center studies in the Kansas City area would be extended to more adequately delineate the clinical aspects of these infections and to survey and evaluate trials of newly developed vaccines for the prevention of some of these diseases.

Hepatitis (liver disease) continues as a serious national public health problem which is unsolved. Although a modest increase in this activity is planned in fiscal year 1958, the level of activity still was not considered adequate. The 1959 estimate proposed that this activity would (1) differentiate cases of serum hepatitis and determine the trend of incidence of this type; (2) conduct studies toward determining current prevalence of hepatitis to evaluate hazards in blood transfusions; (3) study epidemics, for delineating the basic epidemiologic characteristics of the disease; (4) develop a practical liver function test for use in the field; (5) isolate the causative virus in the laboratory; and (6) develop better diagnostic methods.

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Rabies

1958:	
Positions	27
Amount	$250,000
1959:	
Positions	40
Amount	$325,000
Increase:	
Positions	13
Amount	$75,000

Rabies can be controlled and eventually eradicated in some areas if provision is made to attack the disease on an interstate or regional basis. This dread disease from which no one recovers has exploded into an epidemic problem in various areas, and health authorities report the disease to be a serious problem in most States. All warm-blooded animals are susceptible to rabies and any biting animal may spread the disease. It is estimated that 50,000 to 60,000 people received expensive and painful Pasteur treatment in 1956 at a cost of about $100 per person. Adequate control of the disease will require greatly increased assistance to State and local health departments.

The CDC rabies program at present consists of (1) operational control service to States, including technical consultation, surveillance and epidemic aid; (2) training, by diagnostic refresher courses, regional rabies conferences, field control courses and the preparation of training aids and education material; (3) investigations, which include applied research problems in the prevention of human and animal rabies through immunization studies as well as basic projects in improved diagnostic techniques, pathogenesis, studies to ascertain the virus strain differences and host-susceptibility. It also includes recently begun investigations in the epidemiology of the disease in wildlife such as relationship of wild animal population density to rabies epizootics, the role of bats in the spread of the disease, natural immunity, carrier state, unknown reservoirs, and bizarre modes of transmission. While comprehensive in scope, the present CDC rabies program is limited in funds, staff, equipment, and laboratory facilities.

The plan for fiscal year 1959 included intensifying the present wildlife reservoir and epidemiological studies in south Georgia and New York State and the inauguration of similar studies in the Kansas City area, and California. This would afford minimum investigation and supportive control services as a basis for organizing future cooperative regional laboratories in these problem areas.

(Additional information appears on p. 1047.)

FIELD TESTS IN DIAGNOSING STREPTOCOCCAL SORE THROAT

Dr. ANDERSON. To continue: This method, by which the time needed to identify pathogens is cut down from several days to an hour or so, is now being field tested in diagnosing streptococcal sore throat, and other uses for it are in various stages of development.

The $6,200,000 in this budget is requested to enable the Communicable Disease Center to function effectively as the national resource devoted to the prevention and control of communicable diseases. Through its epidemic and disaster aid, consultation, demonstration, training, and publications programs, the center makes available to the States the results of its studies and experience. In this way, the benefits accrue to the people of this country.

Senator HILL. Do you have anything to add?

Dr. ANDERSON. No, sir. Thank you very much.

STATUS OF CONSTRUCTION

Senator HILL. Do you have that building down there?

Dr. ANDERSON. It is started. They have started to clear the land. We have one problem. As the wording of the appropriations act is at present we cannot confer with the contractors and construction people. We cannot confer about minor changes that need to be made

in the building for occupancy but we hope that restriction will be removed in the 1959 appropriations so that we can.

Senator HILL. You are asking us to remove that now?

Dr. ANDERSON. It would help, if you would.

Mr. KELLY. The 1958 appropriations bill contains a proviso which prohibits us from collaboration in connection with these purchase projects, a limitation applicable in fiscal 1958 only. The 1959 bill as it passed the House does not continue the limitation. The Communicable Disease Center has a contract signed and the building is under construction. This is only the building itself.

We are, in addition, going to need equipment in order to make the building useful as a Communicable Disease Center and it is anticipated that there will shortly be transmitted to the Congress a request for supplemental funds to equip the building and that request for funds will also ask for an exclusion from this limitation as it applies to the Communicable Disease Center so that there can be maximum coordination between the people building the building, and the people that are going to use it.

Senator HILL. In light of what was said earlier about these other three buildings, I hope you are not too optimistic here this morning, Mr. Kelly.

Mr. KELLY. I hope not, sir.

Senator HILL. They are going forward with that construction, Doctor?

Dr. ANDERSON. Yes, I sneaked a peek and they are clearing the ground and digging a hole.

Senator HILL. When would the building be finished, the structure itself?

Dr. ANDERSON. In 20 to 27 months. I believe the contract specifies about 823 days for completion.

Senator HILL. 823 days?

Dr. ANDERSON. Yes, sir. That may be shortened.

Senator HILL. There are still 365 days in a year, 823 days is a long time.

Mr. Kelly, we are going to look to you to get that supplemental up here.

Mr. KELLY. We are going to do it, yes, sir.

Senator HILL. I hope we will not be as much disappointed about that as we have been on these other three buildings and also one for the National Library of Medicine.

I think all four of those are most urgent. I think your building is urgent, Doctor.

Dr. ANDERSON. We need it badly.

Senator HILL. We want Mr. Kelly to get that material here quickly.

Do you gentlemen have anything to add?

Dr. ANDERSON. No, sir. Thank you very much.

Senator HILL. Thank you very much.

Sanitary Engineering Activities

STATEMENT OF MARK D. HOLLIS, CHIEF, DIVISION OF SANITARY ENGINEERING SERVICES, ACCOMPANIED BY DR. DAVID E. PRICE, CHIEF, BUREAU OF STATE SERVICES; AND JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

Appropriation Estimate

Sanitary engineering activities

[Sanitary engineering activities:] For expenses, not otherwise provided, necessary to carry out those provisions of sections 301, 311, 314 (c), and 361 of the Act relating to sanitation and other aspects of environmental health, including enforcement of applicable quarantine laws and interstate quarantine regulations, and for carrying out the purposes of the Acts of July 14, 1955 [(Public Law 159)] *(42 U. S. C. 1857–1857f)*, and July 9, 1956 [(Public Law 660)] *(33 U. S. C. 466–466d, 466f–466k)*, including $2,700,000 for grants to States and $300,000 for grants to interstate agencies; *purchase of not to exceed nine passenger motor vehicles for replacement only;* and the hire, maintenance, and operation of aircraft [$12,640,000] *$12,815,000*, to remain available only until June 30, [1958] *1959*.

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate	$12,640,000	$12,815,000	$12,725,000
Deductions: Reserve for savings	16,000	0	0
Total obligations	12,624,000	12,815,000	12,725,000

Obligations by activities

	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Air pollution	213	$3,995,000	213	$3,860,000	213	$3,860,000
2. Water supply and water pollution control	430	6,491,000	430	6,600,000	430	6,510,000
3. Radiological health	51	393,000	76	608,000	76	608,000
4. Milk and Food sanitation	58	490,000	58	492,000	58	492,000
5. Interstate carrier and general sanitation	70	510,000	70	510,000	70	510,000
6. Sanitary engineering center research services	66	440,000	66	440,000	66	440,000
7. Administration	43	305,000	43	305,000	43	305,000
Total obligations	931	12,624,000	956	12,815,000	956	12,725,00

Obligations by objects

	1958 appropriation	1959 budget estimate	1959 House allowance
Total number of permanent positions	931	956	956
Full-time equivalent of all other positions	30	30	25
Average number of all employees	878	935	923
Number of employees at end of year	977	998	990
01 Personal services	$5,423,900	$5,693,300	$5,603,300
02 Travel	469,400	484,400	484,400
03 Transportation of things	92,100	97,100	97,100
04 Communication services	78,400	79,400	79,400
05 Rents and utility services	81,500	81,500	81,500
06 Printing and reproduction	90,600	91,600	91,600
07 Other contractual services	173,000	177,000	177,000
Services performed by other agencies	687,450	687,450	687,450
Research contracts	642,000	642,000	642,000
08 Supplies and materials	238,000	240,100	240,100
09 Equipment	247,950	285,250	285,250
11 Grants, subsidies, and contributions	4,372,900	4,228,300	4,228,300
13 Refunds, awards, and indemnities	3,400	3,700	3,700
15 Taxes and assessments	23,400	23,900	23,900
Total obligations	12,624,000	12,815,000	12,725,000

New positions requested, fiscal year 1959

Radiological health	Grade	Annual salary
Statistician	GS-13	$8,990
Administrative officer	GS-9	5,440
Statistician	GS-9	5,440
6 clerical assistants	GS-5	22,020
2 clerical assistants	GS-4	6,830
Commissioned officers:		
2 director grades		26,158
3 senior grades		33,360
2 full grades		19,680
7 senior assistant grades		53,627
2 assistant grades		11,460
Total positions (27) [1] and annual salaries		193,005
Deduct lapses		35,834
Net cost		[1] 157,171

[1] Part of this increase is offset by a reduction of 2 positions in the departmental service, in the amount of $10,184, making a net increase of 25 positions and $146,987.

Summary of changes

	Positions	Amount
1958 actual appropriation	931	$12,640,000
Decrease: Reserve for savings	0	16,000
1959 base	931	12,624,000
1959 appropriation request	956	12,815,000
Net change requested	+25	+191,000

	1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount
Decreases:				
Reduction in air-pollution training and demonstration grants		−$159,500		−$159,500
Absorption in personal services of the cost of annualization of retirement contributions		−1,700		−1,700
Absorption of cost of upgrading engineers and scientific personnel authorized by the Civil Service Commission		−50,000		−50,000
Total decreases		−211,200		−211,200
Increases:				
For mandatory items:				
Retirement contributions annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)		13,700		13,7
Annualization costs for 163 additional positions authorized in 1958		123,500		33,500
Cost of upgrading salaries of engineers and scientific personnel in accordance with authority given by the Civil Service Commission under sec. 803 (a) of the Classification Act of 1949		50,000		50,000
Subtotal		187,200		97,200
For program items: For expanded program of radiological health	25	215,000	25	215,000
Total increases	25	402,200	25	312,200
Net change requested	+25	+191,000	+25	+101,000

EFFECT OF HOUSE ACTION

Activity No. 2 water supply and water pollution control

The House reduced the total "Sanitary engineering activities" appropriation by $90,000 without comment in its report. As a result of this action, a decrease of $90,000 was taken in this activity. The effect of this reduction will be to restrict State assistance activities in the areas of sewage-treatment construction grants, and enforcement of interstate pollution situations. This will necessarily mean a reduction in the employment of technical personnel on these programs.

A reduction of $30,000 will be made in the enforcement of interstate pollution control activity and $60,000 in the area of technical assistance dealing with sewage treatment construction grants. The loss of approximately 4 man-years in the enforcement work would cause a lag in the holding of conferences, hearings, and technical investigations of pollution in enforcement areas. A loss of 8 man-years in the area of construction grants would retard this program by the necessary deliberate delay of: (1) needed asistance to States, (2) review and approval of grant applications, and (3) reports on progress of project construction. Reduction in the construction grant program is especially significant since the peak workload in this activity will be reached in fiscal year 1959.

These reductions would be made through deliberate delays in the filling of vacancies as they occur through normal turnover. Of course, if the turnover rate were too low, then reduction-in-force procedures would have to be utilized. Civil service positions which would be affected would include engineers, public health program specialists, and regional construction program employees in the regional offices. Commissioned corps sanitary engineer positions would also have to be left vacant for a longer than normal period, as would positions for temporary employees and consultants at headquarters and in the regional offices.

Allocations of grant-in-aid funds for water-pollution control

State or Territory	1957 allocations	1958 allocations	Estimated 1959 allocations
Alabama	$38,256	$59,100	$57,800
Arizona	17,318	22,500	23,300
Arkansas	29,529	41,500	40,000
California	75,130	127,100	132,900
Colorado	20,751	28,400	28,900
Connecticut	31,294	45,900	46,600
Delaware	21,769	29,400	29,400
District of Columbia	23,236	32,000	31,600
Florida	33,654	53,600	56,600
Georgia	40,576	62,200	62,000
Idaho	16,006	19,300	19,300
Illinois	67,976	110,000	109,400
Indiana	40,819	63,700	64,800
Iowa	30,365	44,400	44,800
Kansas	24,484	34,800	34,900
Kentucky	36,447	54,900	54,400
Louisiana	34,817	52,600	52,200
Maine	19,331	24,900	24,900
Maryland	33,007	50,000	50,200
Massachusetts	50,358	77,000	75,000
Michigan	55,373	90,500	94,600
Minnesota	33,385	49,600	49,000
Mississippi	34,538	50,100	50,200
Missouri	38,342	59,000	57,900
Montana	15,415	18,000	18,300
Nebraska	20,797	27,900	28,100
Nevada	12,864	13,700	13,900
New Hampshire	18,537	23,400	23,600
New Jersey	48,391	75,600	77,400
New Mexico	17,052	21,000	21,100
New York	104,577	173,900	166,400
North Carolina	48,248	77,000	76,200
North Dakota	16,957	20,500	20,100
Ohio	66,988	110,200	110,800
Oklahoma	27,374	38,700	38,800
Oregon	21,785	29,700	30,100
Pennsylvania	82,462	134,100	132,100
Rhode Island	25,780	36,000	36,200
South Carolina	33,184	50,300	50,500
South Dakota	16,936	20,800	20,800
Tennessee	40,509	61,900	61,100
Texas	62,605	103,000	103,800
Utah	17,158	21,300	21,600
Vermont	16,626	19,600	19,500
Virginia	37,771	57,100	57,100
Washington	26,555	38,200	38,500
West Virginia	29,331	42,200	41,300
Wisconsin	39,472	61,100	60,200
Wyoming	13,633	15,000	15,000
Alaska	13,023	15,400	15,300
Hawaii	18,547	24,000	24,400
Puerto Rico	40,286	61,100	60,200
Virgin Islands	20,376	26,800	26,900
Total	1,800,000	2,700,000	2,700,000

Estimated allocations to interstate agencies

Interstate agency	Estimated 1958 allocations	Estimated 1959 allocations	Federal share of total program costs
			Percent
New England Interstate Water Pollution Control Commission	$54,500	$54,000	42.9
Ohio River Valley Water Sanitation Commission	95,800	96,400	46.8
Interstate Commission on the Delaware River Basin	42,800	42,800	43.4
Interstate Sanitation Commission	64,600	64,300	39.8
Interstate Commission on the Potomac River Basin	24,100	24,200	51.6
Bi-State Development Agency	18,200	18,300	43.8
Total	300,000	300,000	

NOTE.—The amounts and percentages are tentative.

PREPARED STATEMENT

Senator HILL. The sanitary engineering activities, Mr. Hollis, Chief of the Division of Sanitary Engineering Services.

We are very happy to have you here, sir. Do you have a prepared statement?

Mr. HOLLIS. I do, Senator. I might submit the statement and brief it down if you would like.

Senator HILL. Fine.

(The statement referred to follows:)

STATEMENT OF CHIEF, DIVISION OF SANITARY ENGINEERING SERVICES

Mr. Chairman and members of the committee, sanitary engineering activities deal with environmental factors affecting man's health and general welfare. Included in this appropriation request are funds for Public Health Service programs on air pollution, water supply and water pollution control, radiological health, milk, food and shellfish sanitation, interstate carrier and general engineering, and facility operation cost of the Sanitary Engineering Center.

We have presented before this committee, in the past several years, information on the impact of population growth and economic development on man's environment and, in turn, the effect of these changes on his health and well-being. The objectives of the Public Health Service activities in environmental health, including research, technical assistance, training, and aid on interstate problems, have been outlined. Our program plans for next year reflect the support needed for continuing the essential Federal activities in this field, and provide for focusing effort on elements of the problem most urgently requiring attention, taking into consideration both the overall budget situation and the relationship of these functions to our national well-being. The appropriation request for fiscal year 1959 includes no program expansion, with the exception of radiological health in the amount of $215,000.

Heretofore, we have been concerned with the presence of living contaminants (bacteria, viruses, parasites) in air, water, and food; but now we must consider also, in our assessment of environmental health problems, the new and growing problem of nonliving contaminants. These contaminants are produced by wastes which result from expanding uses of radioactive materials, from industrial operations, and from everyday home and commercial activities involving a vast array of new materials and compounds. Not much is known about the health effects of chronic exposure to these nonliving pollutants. However, some substances which are definitely toxic or have other deleterious effects at low levels have been identified. This is particularly important because the trends are generally upward. In addition to health aspects, the effects on aquatic life and wildlife, agriculture, and economic development are of growing concern. Our efforts are directed toward (1) developing tools for identification and measurement, (2) gaining an understanding of the behavior of these materials, particularly in our air and water resources, and (3) devising methods of prevention and control.

CHANGING SANITATION PROGRAMS

Our basic sanitation programs, such as milk, food, and shellfish sanitation, and interstate carrier activities, are also changing with modern developments. For example, the merchandising of readily perishable foods and beverages, including precooked nonsterile foods and beverages, through coin-operated vending machines, introduces a whole new range of potentially hazardous conditions. Jet and turbo-prop aircraft, now under construction, must make major reductions in turnaround time in order to be operated profitably. Through collaboration with the aircraft industry, the water-supply, food-service, and waste-disposal facilities are being redesigned for improved servicing and sanitation. Aside from interstate activities, emphasis in these Public Health Service programs is on assisting State and local agencies. We will continue to work for better engineering and scientific competency through support of training and research grants to universities.

AIR POLLUTION

The air-pollution problem is nationwide. Air pollution causes civic and economic blight, the corrosion of industrial facilities and domestic housing, reduction in visibility, with consequent hazards to comfort. In addition to adverse effects on human health, economic damage is estimated at $3 billion annually.

The extent of permanent damage to human health is not yet fully known, but among other suspected effects, it is significant that a report of a study group sponsored by the American Cancer Society and other organizations states: "Epidemiologic studies also indicate that cigarette smoking cannot account for all cases of epidermoid cancer of the lung. There are other causative environmental factors, the most important of which are probably various atmospheric pollutants. * * * A definite need exists for determining the chemical nature of these pollutants * * *."

With our constantly increasing industrialization, transportation, and urbanization, the problem inevitably will become more severe. Existing knowledge is inadequate to provide the fully necessary bases for needed control measures. For this reason approximately 80 percent of the air-pollution budget is estimated for research. However, the volume of requests for technical assistance to affected States and localities in steadily growing. The program includes:

(*a*) The design, testing, and development of methods and devices for chemical and physical measurements and for studying the complicated reactions of air pollutants.

(*b*) The physical measurement, identification, and tracing of air pollutants.

(*c*) The development of methods and devices for controlling or preventing the introduction of air pollutants into the atmosphere.

(*d*) Laboratory studies of the physiologic effect of pollutants, statistical studies of the relationship between pollution and illness and death in metropolitan areas, and epidemiologic studies of the health effects of pollutants in specific communities.

(*e*) Furnishing technical guidance and consultation to States and communities in establishing and operating community air pollution control programs.

(*f*) The organization, development, and conduct of training activities designed to increase the number, competence, and knowledge of personnel so badly needed in the field of community air pollution.

Progress is being made in all of these. For example, the National air sampling network is providing information on the intensity and characteristics of air pollution in American cities. New methods have been developed to permit the quantitative identification of some of the many pollutants occurring in urban atmospheres. New information has been found on the role of certain small particles in the air in intensifying the effects of low concentration of gaseous contaminations.

Continuing laboratory studies are providing new information on the adverse physiologic effects of such common pollutants as ozone, sulfur dioxide, and hydrocarbon reaction products. Studies have demonstrated that some pollutants can cause cancer in laboratory animals. To extend these and similar findings to human health, greater emphasis will be placed on use of community epidemiologic-aerometric surveys to permit accurate correlation of air pollution exposures and their effects on human health.

WATER SUPPLY AND WATER POLLUTION CONTROL

This appropriation includes funds requested for support of the Public Health Service water supply and water pollution control program. This program is the primary instrument by which the Federal Government, working with and through the appropriate State and interstate agencies, provides assistance to municipalities, industries, and others concerned with water supply and water pollution control problems.

ADMINISTRATION OF GRANTS FOR WASTE TREATMENT WORKS CONSTRUCTION

In the initial stages of the construction grants for waste treatment works program, the State agencies assisted the Public Health Service in planning efficient procedures for processing applications for grants. Major responsibility for administration of the grants has been delegated to the nine Public Health Service field offices. This decentralized processing of applications in close cooperation with the States permits rapid service to sponsors and insures a continuation of a low cost for administration.

The cost of administering these construction grants amounts to only about 1.8 percent of the amount requested. The maximum field inspection load, however, will not be experienced until late in calendar year 1958.

GRANTS TO STATE AND INTERSTATE WATER POLLUTION CONTROL PROGRAMS

The State governments, through their internal and interstate agencies, are primarily responsible for eliminating or preventing intolerable water pollution situations and for planning water supply activities. These grants are authorized to enable the States to improve and expand their water pollution control programs to meet the needs of rapid national growth, and to stimulate local action on water pollution problems—problems that are the inevitable results from increasing urbanization and industrialization. Response to the $3 million appropriated in fiscal year 1958 demonstrates that State and local interest and support in water pollution control is on the increase.

RESEARCH

As reported last year, the most urgent need in this field is for scientific knowledge on which to base management of water quality. In an increasing number of instances, standard waste treatment methods are not reducing the deleterious potentials of the newer components of metropolitan wastes. Many untreated wastes, including pollutants for which treatment processes are not presently known, are reaching watercourses independently of municipal sewerage systems through agricultural, mining, transportation, and manufacturing operations. In view of the effect which the new nonliving contaminants associated with metropolitan and industrial areas—the synthetic organic compounds, heavy metals, and radioactive materials—will have on the future costs of municipal waste treatment works, we are concentrating our limited research resources to these problems. This is in accord with the broad plan for mobilizing available national research resources as reported to the committee last year.

In addition, we are seeking to extend knowledge of the basic processes by which the complex biological, chemical, and physical reactions purify wastes. This new understanding is basic to development of highly efficient, as well as economically feasible processes of sewage treatment far superior to any method in use today—approaching 100 percent purification. Within the next generation, sewage residuals from presently known sewage treatment processes applied to all wastes, when imposed on a fixed water base, will result in more pollution in many areas than we have today.

Work on other serious pollution problems of today—chlorides, acid mine drainage, and others—is directed largely to field studies and to the definition of research questions for future study.

BASIC DATA COLLECTION AND ANALYSIS

Basic data on water quality and other information related to water pollution are needed to enable regulatory authorities and others concerned to evaluate the scope and character of the problems and to undertake measures for control and improvement. Public Health Service activities, along with those of the States, provide a continuing collection and analysis system in this field on a national basis. To this end, the activity provides a central clearinghouse for assembly

and analysis of data, and dissemination to all concerned. These data will be increasingly valuable in the evaluation of the effectiveness of the growing municipal and industrial expenditures for control of water pollution.

During 1958, major emphasis has been placed on the development of a basic network of about 50 water quality stations which will be operated cooperatively by the Public Health Service and State and local agencies. Data processing procedures for these and supplemental State stations have been developed. Particular attention is being paid to radioactivity levels in surface waters and to organic contaminants traceable primarily to expanding industrial operations and the widespread use of a variety of new compounds and materials.

TECHNICAL ASSISTANCE

Because of the specialized skills of its research and field study staffs and the laboratory and field equipment at its disposal, the Service is particularly suited for scientific consultation to States and local agencies. In the area of technical assistance, emphasis is placed on water supply and water pollution control functions that are not readily amenable to State attack, due either to the newness and complexity of the problem, or the rare occurrence in any particular State.

Another effort which is receiving renewed attention is that of supplying technical information for public use. State agencies, local governments, and many volunteer organizations have aroused public consciousness about water pollution and the need for its abatement. There is still need to develop the concept of water quality as a national resource and for factual information about the causes, effects, nature, and control of water pollution.

An example of the Public Health Service approach to the solution of water quality problems that affect several States is the "Water Quality Conservation Study of the Arkansas and Red Rivers." These interstate streams located in a water-deficient area, have suffered degradation through natural salt and oil brine pollution, resulting in waters unfit for many important uses. The study objective is to develop specific proposals for restoring usefulness of these waters.

ENFORCEMENT

The conference technique, provided for in the Federal Water Pollution Control Act, is a definite statutory step in the formal enforcement procedure, proving a valuable means for initiating resolution of interstate pollution problems. It has provided a means of getting State officials and others concerned together in free discussion to reach agreements.

During the past year, Federal enforcement procedures have been responsible for cleaning up interstate pollution in the Corney drainage system involving the States of Arkansas and Louisiana. This pollution problem, caused by discharges from oil wells, had been of many years' standing. In addition, conferences have been held on the:

Big Blue River area near Beatrice, Nebr. (Nebraska, Kansas)
Missouri River area near St. Joseph, Mo. (Kansas, Missouri)
Missouri River area near Omaha, Nebr. (Iowa, Kansas, Nebraska, Missouri)
Missouri River area near Kansas City, Mo. (Kansas, Missouri)

Another conference has begun on the Potomac River-Washington metropolitan area (District of Columbia, Maryland, Virginia) and one is scheduled for March 1958 for the Missouri River, St. Louis area (Illinois, Missouri).

In all completed conferences, understandings have been reached between polluters and the States and schedules have been set for remedial action. When treatment facilities are constructed as called for in these schedules, about 700 miles of major interstate streams will be restored to a quality suitable for public water supply, propagation of fish and aquatic life and wildlife, recreational purposes, and for agricultural and industrial uses. These remedial treatment works are estimated to cost local communities and industries more than $100 million.

While conferences are scheduled as requested by States or determined necessary by the Surgeon General, their success is dependent on having factual information on water pollution and damages to legitimate water uses. In 1959, preliminary dockets of such information will be completed on all interstate water situations and, by cooperative arrangements with the States concerned, continuing surveillance of these waters maintained. It is also expected that conferences will be held in six additional areas.

RADIOLOGICAL HEALTH

The increasing exposure of the population to ionizing radiation is one of the Nation's most significant health problems. All sources of exposure must be given consideration in assessing and controlling this hazard as the exposure effects on health are cumulative regardless of source. Radiation from the developing nuclear power industry represents an increasing potential hazard. Even where there is no industrial reactor problem involved at the present time, the great increase in the use of sources of radiation in industry for research and processing and in medicine for research, diagnostic, and therapeutic purposes, poses difficult public health problems.

At present, the greatest manmade source of external radiation stems from the exposure of patients in medical and dental X-ray procedures. Techniques are available by which these exposures may be reduced without adversely affecting their value. Consequently, an increase of $215,000 is requested to initiate an attack on these aspects of the problem. The additional funds are requested to enable the following steps to be taken:

1. The undertaking of a program of studies on the public health effects of radiation, featuring the initiation of epidemiological investigations on the long-term effects of low level exposure of groups of humans who have received known amounts of radiation.
2. Launching of a series of local demonstration-control projects aimed at assisting the States in the development of programs directed toward the reduction of exposures in the healing arts and industrial uses of radiation.
3. Intensification of the training program for Public Health Service medical and sanitary engineering officers in radiobiology and radiological health.

MILK, FOOD, AND SHELLFISH SANITATION

In addition to the environmental health programs mentioned above, the milk, food, and shellfish sanitation activities of the Service are cornerstones in our disease-prevention structure and are necessary for the protection of the public health. Prevention of milk and food-borne disease, which is becoming increasingly complex due to a rapidly changing technology, is primarily dependent upon the day-to-day control efforts of State and local health agencies. The objective of the Service is to provide leadership and "hard core" technical assistance needed by the States to cope with those problems which are nationwide in scope and which the individual States, lacking resources, cannot resolve. Specific activities include research and field investigations, development of uniform standards, and provision of technical assistance in the application of public health procedures.

Food-borne illnesses, notably "food poisoning" outbreaks, continue to occur in surprising amounts. Within the rather limited resources available, research is directed toward the development of methodology for the rapid detection, identification, and control of causative organisms and toxins. Changing technology also is rendering obsolete many of the practices long relied upon by health authorities for the sanitary control of milk supplies and food establishments. Continued use of such practices would be both inefficient and wasteful of public funds. A field study will be undertaken to develop and test new and more efficient procedures for milk and food control.

The Service will continue to work with the States in the voluntary programs for the sanitary control and certification of milk shippers and shellfish shippers. These cooperative State-PHS programs, in which the industries participate, eliminate the need for duplicate inspections by State and local agencies, and facilitate nationwide acceptance of high-quality products from State-certified sources.

INTERSTATE CARRIER SANITATION AND GENERAL ENGINEERING

Modern developments in the transportation field have necessitated a reorientation of the interstate carrier activities. Current sanitary engineering criteria are being reexamined and revised to cover the servicing operations of new types of carrier equipment and operations. Jet and turboprop aircraft require substantially different water supply, waste disposal, and food-servicing facilities. Development of nuclear reactor power for merchant vessels presents problems of public health protection over and above those normally experienced on vessels. Institution of food-servicing operations on buses involves the development of adequate facilities for food storage and serving on the conveyance and a further expansion of the supervisory program on food sources. Satisfactory solutions to

these problems will have to be met through mutual joint studies currently underway.

Such new demands, on top of a heavy and basic workload, which includes sanitation inspection and surveillance of the 2,800 watering points, 1,500 sources of milk and food, and the 4,100 conveyances used daily by the carrier concerns, have placed strain and challange on the ingenuity of management in this program.

Also, in cooperation with the American Public Works Association, this program is developing basic data, program planning, and evaluation techniques needed by local communities in handling their solid waste-disposal problems. Technical assistance is being given on basic sanitary engineering programs, and recreational and school sanitation. A limited study of the sanitary engineering problems within the metropolitan complexes has been initiated.

EFFECT OF HOUSE ACTION

The House reduced the total appropriation by $90,000 without comment in its report. As a result of this action, a decrease of $90,000 was taken in the water supply and water pollution control activity. The effect of this reduction will be to restrict State asistance activities in the areas of sewage treatment construction grants and enforcement of interstate pollution situations. This will necessarily mean reduction in technical personnel on these programs. It is urgently requested, therefore, that $90,000 be restored to the budget for the annualization of personal services in the water supply and water pollution control activity.

I shall be glad, Mr. Chairman, to answer such question as the committee may have.

GENERAL STATEMENT

Mr. HOLLIS. For the past several years, Mr. Chairman, in our discussions before this committee, we have emphasized the close relationship between these sanitary engineering programs and the unprecedented growth of population and industry. We have tried to emphasize the changing complexity of sanitary engineering work in this new age of science and technology. I think there is little need to remind this committee of the upward population trends, or to cite the figures on changing technology because I think these are all well known to the committee.

TECHNOLOGICAL ECONOMY AND POLLUTION PROBLEMS

It is this congested human activity in a technological economy that creates these problems of wastes to pollute and deteriorate the environment. So, we have more air and water pollution, more complex problems with public water supplies and food sanitation.

These problems are going to continue to increase and change with population growth and industrial development.

Also the health problems are broadening. Prior to World War II we were dealing primarily with environmental contamination related to living organisms, to germs that are responsible for epidemics and outbreaks of diseases.

Most of our sanitation practices were based on this concept.

Now this has broadened and includes nonliving contaminants.

By way of example here in this bottle is a sample of the effects of detergent on drinking water. As you see, if you shake it you get a soapy foam. These other bottles are samples of chemical conglomerates that are found in drinking water supplies. At some point in our development, as these increase, likely they will reach a point of concentration to be of direct health significance and will have an impact on health that is as yet undiagnosed.

Senator HILL. Is this ordinary tap water?

Mr. HOLLIS. That is tap water, drinking water.

Senator HILL. As you say, you might draw it to drink or put in your coffee.

Mr. HOLLIS. That is right.

This is merely a result and reflection of the age that we are in. We deal not only with a heavier load of human waste pollution but at the same time through research we must develop an understanding of the behavior of these new types of contaminants.

It is in this setting, Mr. Chairman, that we have to adjust our Federal level programs to fit into the needs of the time. We think we are moving in good order in air and water pollution.

The prepared statement cites 5 examples of actions being taken in water and 3 on the air-pollution activity.

Another significant problem that is moving in on us quite rapidly is the increasing exposure of the population to ionizing radiation. All sources of radiation exposure must be considered, as the effects on health are cumulative regardless of source.

At the same time, our basic programs of milk and food sanitation continue to be a cornerstone in health practice. These, too, we must watch.

We propose to do this and continue our program of technical assistance to the States although there is no increase proposed in the estimates before the committee.

Senator HILL. Had you asked for an increase?

Mr. HOLLIS. Yes, sir. In most of these we did, sir.

Senator HILL. Did you ask for an increase in that item?

Mr. HOLLIS. Yes, sir.

Senator HILL. Go ahead, and we will get into the increase later.

LOCAL COOPERATION

Mr. HOLLIS. Across the Nation, we think, Mr. Chairman, that our local-State-Federal practices are contributing substantially in preventing epidemics of communicable diseases.

We think maintenance of these barriers is becoming largely a State and local job with specialized Federal backup. However, I would like to make it quite clear that technological advances and the speed of the change taking place are such that environmental health problems are simply outdistancing our understanding of their impacts on health and our knowledge of how to handle them.

This is especially true of water supply, air and water pollution, as well as with metropolitan area sanitation.

We face new and vexing problems in this age of science. We can expect more to confront us. The situation will get worse, not better, and we are going to have less time to work out solutions. We propose in this next year to take a hard look at some of these changing problems and the national patterns of approach and we will do this in close collaboration with the States and will make full use of our advisory committees.

For the fiscal year 1959, the estimates for these programs totaled $12,813,000, an increase of $175,000 over fiscal year 1958 appropriation. With some internal program adjustment this estimate will provide a $215,000 increase for the item of radiological health.

HOUSE REDUCTION

The House action, Mr. Chairman, reduced this total appropriation request by $90,000 without specific comment in the report.

As a result of the action the decrease of $90,000 is taken in the item of water supply and water pollution control. The effect of this reduction will restrict the State assistance programs in the areas of sewage treatment construction grants and the enforcement of interstate pollution situations. This will necessarily mean some reduction in technical personnel on these programs.

It is urgently requested, therefore, that the $90,000 be restored to the budget for the annualization of personnel now assigned to the water supply and water pollution control activity.

We will be glad to answer such questions as the committee may have.

PURPOSES OF ORIGINAL REQUEST

Senator HILL. Your Division requested some $17,500,000, did they not?

Mr. HOLLIS. Of the Department, yes. sir.

Senator HILL. That was cut by the Department to $13,420,000.

Mr. HOLLIS. That is correct, sir.

Senator HILL. That was the request presented to the Bureau of the Budget?

Mr. HOLLIS. Yes, sir.

Senator HILL. For what did you request these funds, the difference between $17,500,000 and the $13,420,000?

Mr. HOLLIS. We asked for the full $5 million authorization on air pollution; $8 million in the water supply and water pollution control activity; $825,000 for the milk and food sanitation program that I mentioned; and $800,000 on the general engineering and interstate carrier. The latter is a program of sanitation on trains and buses and ships.

Senator HILL. From your request you got approximately a $5 million reduction?

Mr. HOLLIS. Yes, sir.

Senator HILL. Where would that reduction be taken?

Mr. HOLLIS. First the air pollution work was cut back to $3,860,000. We had to reduce the research grants program in that area, also the contract research and restrict our State assistance program to fit into the allowance. In water it will prevent us from implementing all the features of the new Federal Water Pollution Act, specifically we will not be able to move ahead too far on basic data collection, water quality data relating to new materials that are now found in increasing amounts in water.

Dr. PRICE. The amount of the reduction in water was $1,400,000.

Senator HILL. That was in the water alone?

Mr. HOLLIS. We asked for $2 million in the radiological health activity. That, of course, has been reduced to $608,000.

Senator HILL. There is about a 70 percent reduction there.

Mr. HOLLIS. Yes, sir.

Senator HILL. I wish you would check over your statement and add for the sake of the record any additional facts which might occur to

you or any additional matters in connection with this nearly $5 million reduction. Will you do that for us?

Mr. HOLLIS. Yes, sir.

(The information referred to follows:)

Sanitary engineering activities—History of 1959 estimates

Activity	1959 Public Health Service request	Reduction by Department	1959 Department's request	Reductions by Bureau of the Budget	1959 President's budget	Total reductions
1. Air pollution	$5,000,000	$955,000	$4,045,000	$185,000	$3,860,000	$1,140,000
2. Water supply and water pollution control	8,000,000	1,375,000	6,625,000	25,000	6,600,000	1,400,000
3. Radiological health	2,000,000	1,000,000	1,000,000	392,000	608,000	1,392,000
4. Milk and food sanitation	825,000	330,000	495,000	3,000	492,000	333,000
5. Interstate carrier and general sanitation	800,000	290,000	510,000	0	510,000	290,000
6. Sanitary engineering center research services	570,000	130,000	440,000	0	440,000	130,000
7. Administration	305,000	0	305,000	0	305,000	0
Total	17,500,000	4,080,000	13,420,000	605,000	12,815,000	4,685,000

Air pollution, —$1,140,000

Research, $960,200.—

Community studies or relation between air pollution and human health	$350,000
National air pollution network; Identification and measurement research	285,000
Auto exhaust studies, including toxicology	225,000
Clinical studies on respiratory effects of air pollution	100,200
Total	960,200

The effect of this reduction is to prevent the planned acceleration of the research program on the growing problem of community air pollution. Items particularly affected are those concerned with:

(*a*) Community and clinical studies of the relation between air pollutants and human health, basic to ultimate development of rational control procedures needed by the responsible State and local agencies;

(*b*) Development of methods for assay and control of specific polluting materials in community atmospheres to which large populations are now exposed. Emphasis would be placed on automobile exhaust as a complex, difficult-to-control air pollutant;

(*c*) Expansion of the national network for collection and analysis of basic data on the intensity and character of air pollution in American cities to include gaseous contaminants which are of growing importance.

Technical assistance—Demonstration project grants, $97,500.—The reduction in technical assistance will prevent the award of any new demonstration project grants to States and local communities for assay of their specific problems and the development of procedures and organization for dealing with them. These projects combine the dual advantages of providing a testing ground for new developments which are of potential regional or national significance with maximum local initiative and autonomy.

Training—Traineeship grants, $82,300.—This reduction will prevent the support of any trainees at academic institutions in air pollution research and control procedures and materially slow down the correction of the existing critical shortage of engineering and scientific personnel for such activities. There is a current backlog of about 20 applications for needed technical training.

Water supply and water pollution control,—$1,400,000

The reduction deferred steps to further implementation of the Federal Water Pollution Control Act of 1956. It curtailed: field studies of interstate pollution problems; the implementation of the research grant and fellowship authorizations; and the water quality data project.

Field studies reduced,—$775,000.—Field studies of interstate waters record precise basic data on the sources, amounts and natures of pollution that restricts

water use, and map plans for improving and protecting the quality of the Nation's surface waters. They also fix responsibility for pollution that may require enforcement action, which is undertaken when effective voluntary corrective programs are not forthcoming. Without the funds originally requested, it will not be possible to accelerate these important projects.

Arkansas-Red Rivers water quality conservation study,—$400,000.—Since the original budget was prepared this project has come to the fore as the most urgently needed of the field studies. The findings of this study will have an important influence on public water storage and distribution projects already authorized that will cost $1.5 billion. Unsatisfactory water quality in these basins is retarding economic growth and greatly increasing the costs of municipal water supply in the frequently drought-stricken surrounding areas. After discussing this project at its June 1957 meeting, the presidentially appointed Water Pollution Control Advisory Board made the following report: "The Board feels that the current water quality rehabilitation study in the Arkansas-Red basins is an outstanding example of the type of specific project the Public Health Service should undertake, inasmuch as the States are not in a position to do so." The increase would have accelerated this project from a $100,000 to a $500,000 annual rate of activity.

Other major field studies, —$375,000.—In the current year the Public Health Service has initiated work on other major interstate pollution studies that cannot be accelerated without the funds originally requested. In the New York Harbor area, where the Service has been asked to investigate pollution of the outer waters, we have devoted only $4,500 to review of existing data and will be able, under the reduced budget, to increase 1959 activity by only $5,000. In the Ouachita basin (Arkansas-Louisiana) pollution is retarding important water storage and distribution development; the present budget will permit only monitoring of water quality at the State line, at a cost of $10,000, in 1959.

Research, —$341,000.—This portion of the original request was intended to extend support to research grants in water supply and water pollution problems ($241,000) and to implement the Federal Water Pollution Control Act provision for research fellowships ($100,000). These funds would have supported an estimated 20 additional grants and 20 fellowships. The current backlog of approved research grant applications is about $1,250,000. Like the grants, the fellowships result in extending our knowledge about water quality problems. In addition, they attract young upcoming research talent to the field, which has been in an unfavorable competitive position in comparison with other fields that already offer fellowships and other inducements. Of major interest to the Service, and to other Government and State agencies that use its findings, are the many new complex chemicals and other pollutants that get into surface waters through use in agriculture, wildlife management, residential maintenance, industry, and other applications. Grants and fellowships are well suited for use in encouraging serious study of the effects of these contaminants on water for human consumption, agricultural use, wildlife management, and recreational uses.

The original proposal would have increased funds budgeted for these research purposes from $159,000 to $500,000.

Water quality data, —$284,000.—Within the present 1959 budget, implementation of the Federal Water Pollution Control Act provision for basic data collection and publication will remain at the 1958 level. The proposed increase would have effected further implementation of the act along lines urgently recommended by the President's Advisory Committee on Water Resources Policy, by significantly extending the water quality data collection.

Combining water quality analyses by local and State agencies, with those made for a number of key reference points by Public Health Service laboratories, this project aims at establishing comparable records of trends in the quality of all major surface waters in the United States. Within the $200,000 current annual rate of expenditure, the Public Health Service has been able to provide laboratory service for only 50 sampling points. The original budget proposal would have increased this number to 100. The water quality data project has been planned for gradual, positive development. The goal is to establish water quality trend statistics for about 2,500 points throughout the Nation, for 90 percent of which local and State agencies would provide the necessary laboratory services, in the course of regular operations.

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Radiological health	—$1,392,000
Research (direct)	— 499,000
Technical assistance	— 358,000
Training	— 335,000
Facilities	— 200,000

General statement: A major increase was requested to enable the Service to begin to fulfill its proper role in the field of radiological health. This increase was requested not in light of a desirable rate of normal growth over fiscal year 1958, but rather in light of what was considered to be the totally inadequate activities to date. In preparing the estimate, the limiting factor was considered to be the availability of personnel. It was prepared on the basis of a careful and realistic analysis of ability to staff. Much of the increase involved nonmedical and nonengineering positions, such as chemists, statisticians, and biologists. The full utilization of the capabilities of the medical officers, scientists, and engineers could best be made by expansion of the supporting staff and utilization of nontechnical persons wherever possible.

	P. H. S. estimate	Department allowance	Bureau of Budget allowance
Research	$715,000	$350,000	$216,000
1. Preliminary work toward establishing safe yet realistic radiation exposure standards for industrial users and medical practitioners by epidemiological studies on human groups incidentally exposed to radiation in the healing arts and industry. Particular groups to be studied included: (1) Women receiving pelvic and abdominal X-ray treatment during pregnancy; (2) children heavily exposed during treatment for ringworm; (3) workers exposed to radiation in their daily working routine	160,000	80,000	54,000
2. Continuation of present minimal studies of human and animal levels of uptake of environmental radioactive contaminations	80,000	10,000	10,000
3. Developmental activities on technical improvements in equipment and its operation to reduce exposures in the healing arts	25,000	10,000	10,000
4. (*a*) Studies begun in 1957 fiscal year and project expansion through 1958–59 relating to the fate of radioactive materials in the environment and the determination of background levels, fallout, rainout, and the concentration of radioactivity in cisterns and streams, and development of analytical methods of radiation assessments	125,000	93,000	54,000
(*b*) Studies in radiochemical and radiometric analysis as part of the identification of radionuclides and evaluation of the potential hazards from the presence of specific isotopes in the environment	180,000	102,000	78,000
5. Research regarding activity of coolants, associated with increased number of nuclear facilities, which reach the environment regardless of waste treatment measures taken by the installation	60,000	55,000	10,000
6. Application of radioactive methods including activation analysis to environmental sample testing for tracer elements in air, water and food	50,000	0	0
7. Initiate a reference analytical system for evaluating laboratory techniques and practices of State and local health agencies	35,000	0	0

JUSTIFICATION FOR RESEARCH

The establishment of safe, yet realistic, radiation exposure standards is a basic need in radiological health program operations, in the design and operation of radiation producing facilities, and in the intelligent utilization of radiation, both in industry and in the healing arts. Thus, for example, such data are urgently needed to determine the most economical shielding practices in the atomic energy industry. Practitioners of the healing arts must constantly make decisions as to whether the probable benefit of a radiation exposure exceeds the possible harm, a decision which obviously cannot be made intelligently unless good quantitative data are available concerning the effects of low levels of radiation on humans. To date, the necessary data on humans are almost totally nonexistent. Our standards, operations, and programing are based almost entirely

on laboratory and animal data. The deleterious effects of radiation on humans are expected to be identical in nature to disease conditions which are already normally present in the population. The only foreseeable method by which reliable human data on the effects of low-level radiation exposures can be obtained is by epidemiological and statistical studies on human groups incidentally exposed to radiation. Present evidence indicates that the deleterious effects from low levels of radiation will not become manifest for years or even decades following the exposure. For these reasons, extensive long-term epidemiological studies involving large numbers of people will be required to obtain even semi-quantitative definite answers.

Pending the acquisition of more complete data, it must be assumed, on the basis of scientific information already on hand, that, in at least a major degree, there is no absolutely safe limit of radiation exposure and that, therefore, any exposure which is not necessary is to be avoided and that all exposures should be reduced to the lowest point consistent with the desired results. In the field of medical diagnostic radiology there have been two developments which show promise of making possible the reduction of radiation doses to patients to one-tenth, one-hundredth, or even less of the current necessary exposure. These two techniques are the use of mirror optics which provide an amplification of the brightness of fluoroscopic images, and electronic image amplification along the same general principle as the television system. Both of these methods have been demonstrated to be possible and apparently require only intensive development before they will be practical for widespread use. The immediate benefits which would result from the widespread application of these techniques, not only in terms of lower radiation dose to the patients, but also in terms of more accurate medical diagnosis, justify a significant effort on the part of the Service to complete the development work necessary.

In order to complement our work in environmental analysis of the radioactive contamination of the air, water, and other elements of our environment, its significance on humans must be assessed. An essential need was considered to be greatly expanded studies on the uptake, biological turnover, and biological concentration of environmental contaminants. An expansion of laboratory studies on total radioactivity and the concentration of specific radioisotopes in various human and animal organs was proposed.

There was also felt to be a basic need for (1) knowing more about the fate of radioactive materials in the environment; (2) determining background, fallout, and rainout radioactivity levels; and (3) developing standardization in the analytical methods of radiation assessments. Further development was also proposed in work already underway on the environmental properties that can be utilized to protect the population through natural retention of materials.

	PHS estimate	Department allowance	Bureau of Budget allowance
Technical assistance	$545,000	$284,000	$187,000
1. Basic regional staffing	125,000	64,500	24,500
2. (a) On-the-spot technical assistance through short-term assignments to States. Expanded technical assistance to States for specialized consultation. Continued liaison with international, National, State, and local organizations active in radiation protection, particularly in industry and the healing arts	50,000	20,000	20,000
(b) Consultation and help in program development in States	60,000	35,000	30,000
3. Local demonstration projects in the application of radiation exposure prevention and control methods, particularly in the industry and the healing arts	90,000	75,000	60,000
4. Headquarters staff to coordinate the activities and to provide nationwide program direction through the development of procedural manuals, guides, technical reports	130,000	89,500	52,500
5. Assist States to develop and evaluate physical and environmental criteria in radiation protection. Establish minimal laboratory facilities contiguous with nuclear installations to make instrument evaluations and to develop working parameters and standards	90,000	----------	----------

JUSTIFICATION FOR TECHNICAL ASSISTANCE

The demands of the Public Health Service for assistance to State authorities fall into two areas—technical assistance and consultation in the area of radiological medical health problems and in the area of other environmental radiological health problems.

In the field of radiological medical health, the greatest current source of radiation exposure results from the diagnostic use of radiation in the healing arts. There can be no doubt that this radiation exposure can be reduced while actually improving the diagnostic quality of the procedure involved. The development of reactors and the application of nuclear energy to beneficial uses by military and civilian interests are increasing the amount of radiation in the environment and consequently, are posing problems which many States cannot adequately solve without assistance. Accordingly, the Public Health Service proposed to meet these demands through the following media:

a. The assignment of trained specialists (physicians or engineers) to regional offices to work with State health offices in demonstration projects and State assistance program development in radiological health;

b. Assignment of Public Health officers to States, on a loan basis, for radiological program development; and

c. Maintenance of a comprehensive system of sampling and measuring the radioactivity of the environment, with the cooperation of the States.

	PHS estimate	Department allowance	Bureau of Budget allowance
Training	$540,000	$366,000	$205,000
1. Short courses. A total of 20 courses for a total of 600 Federal, State, and local health workers in such areas as detection and control of radioactive pollutants in water and air and environmental health: (a) Detection and control of radioactive pollutants in water and air. (b) Radiation safety for X-ray workers. (c) Public health aspects of radiation. (d) Radiological health aspects of milk and food. (e) Determination of radio-nuclides.	225,000	173,000	78,000
2. Develop such materials as course outlines, technical manuals, periodic status reporting of radiological health in United States, statistical information, radiological health procedures, etc., as part of a packaged training program for use of State, local, and other agency radiological training programs	65,000	0	0
3. Five medical officers in advanced training in radiological health. Two medical officers in training in clinical radiology for future utilization in control projects in the healing arts. Two officers in training in public health for future use in program services. Two officers on training assignments to national reactor test site. Two epidemiologists in training. Four nonmedical officers in specialized training in biostatistics and radiation physics. Five engineer officers in training	250,000	193,000	127,000

JUSTIFICATION FOR TRAINING

To provide reasonable competence in Federal and State health agencies, it was proposed to markedly expand current training in the radiological health activities. This estimate provided for the additional training through four plans:

(a) The training program at the sanitary engineering center would have been broadened to include additional general and special short-term courses for State and Federal personnel in the field of radiological health.

(b) Specially selected service officers were to receive advanced training in especially designed courses at various major universities.

(c) Training assignments were to be given to professional personnel at various Atomic Energy Commission installations and test sites.

	PHS estimate	Department allowance	Bureau of Budget allowance
Facilities	$200,000	0	0
A subcritical assembly for use in connection with training activities and a high-level gamma radiation source for use in connection with the research program	200,000	0	0

Milk and food sanitation, —$333,000

The milk, food, and shellfish sanitation item was reduced by $333,000, of which $70,000 was planned for strengthening Public Health Service participation in the cooperative State-Federal interstate milk and shellfish shipper certification activities. Both of these programs have grown considerably in recent years and the Public Health Service has received criticism because of the inadequate level of participation.

The remaining reduction of $263,000 will eliminate planned research on (1) radiation induced changes in foods, the susceptibleness of radiated foods to microbiological growth, and the effectiveness of ionizing radiation in the inactivation of food toxins; and (2) studies of public health problems related to new milk and food processes which are undergoing rapid technological changes, such as time-temperature relationships in the preparation and holding of perishable foods, and evaluation of high-temperature pasteurization process. It will also prevent planned expansion of investigations of paralytic shellfish poison.

Interstate carrier and general sanitation, —$290,000

Urban area sanitation: —$100,000.—For 1959, it was proposed to initiate activities related to the urgent problem of providing adequate and safe water supplies, sewage disposal facilities, and refuse disposal in the rapidly growing complex urban areas of the Nation. These sanitation problems are of major significance in the 172 metropolitan areas, in which 85 percent of the total national population growth occurred from 1950 to 1956. This reduction will limit the planned study to literature research and preliminary review of sanitation problems in 2 or 3 metropolitan areas.

Interstate carrier construction: —$100,000.—This reduction will curtail the discharge of Public Health Service responsibility for technical services relating to water supplies, sewage disposal, food, and milk, provided by interstate carriers. Vessel construction in the United States has increased to a level approximately 5 times that of 2 years ago. Currently there are $1¼ billion of vessels under contract. Similar expansion has taken place in the construction of airports, aircraft, and interstate buses.

Interstate carrier operations: —$90,000.—The proposed expansion of sanitation inspection service on interstate carriers to at least two per conveyance per year cannot be attained due to this reduction. Strengthening of this activity has been planned for several years in order to raise the sanitation level on the public interstate conveyances now serving 1¾ million persons daily.

Sanitary engineering center research services, —$130,000

Sanitary engineering center research service was reduced $130,000. Of this amount $55,000 was planned for building maintenance and protection and $75,000 was to establish a minimum program of epidemiological studies with respect to chemical, bacteriological, and virological elements in the environment.

ENGINEERING ACTIVITIES

Senator HILL. Have you anything else to say about the engineering activities?

I believe under section 4 of the Water Pollution Control Act, certain research is authorized with an indefinite appropriation authorization.

Mr. HOLLIS. That is right, sir.

Senator HILL. You had $159,000 for this purpose this year and you had applications approved in excess of $1,200,000.

Mr. HOLLIS. One and a quarter million dollars, yes, sir. This is the research grant aspect. These are research grants available to research institutions and schools and other centers throughout the country.

Senator HILL. To which you have spoken.

Mr. HOLLIS. Yes, sir.

Senator HILL. You might go over your statement on this and make it full and complete as to these research grants.

Mr. HOLLIS. Yes, sir.

Senator HILL. Thank you, sir.

Have you anything else to add on the engineering activities or water pollution?

Mr. HOLLIS. I think not, sir.

GRANTS FOR WASTE TREATMENT WORKS CONSTRUCTION

STATEMENT OF MARK D. HOLLIS, CHIEF, DIVISION OF SANITARY ENGINEERING SERVICES, ACCOMPANIED BY JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

Grants for waste treatment works construction

[Grants for waste treatment works construction:] For payments under section 6 of the Water Pollution Control Act, as amended [(70 Stat. 502)] (*33 U. S. C. 466e*), $45,000,000, [which together with the amount appropriated under this head in the Second Supplemental Appropriation Act, 1957 (70 Stat. 769) shall be applied to payment on account of allotments made for the current and preceding fiscal years pursuant to said Act, such sums] to remain available only until June 30, [1959] *1960*: *Provided*, That allotments under such section 6 for the current fiscal year shall be made on the basis of $50,000,000.

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate	$45,000,000	$45,000,000	$45,000,000
Additional unobligated balance brought forward	12,378,908	0	0
Total obligations	57,378,908	45,000,000	45,000,000

Obligations by activities

	1958 appropriation	1959 budget estimate	1959 House allowance
Grants for construction	$45,000,000	$45,000,000	$45,000,000
Unobligated balance brought forward	12,378,908	0	0
Total obligations	57,378,908	45,000,000	45,000,000

Obligations by objects

	1958 appropriation	1959 budget estimate	1959 House allowance
11. Grants, subsidies, and contributions	$57,378,908	$45,000,000	$45,000,000

Allocations of grant-in-aid funds for waste treatment works construction

State or Territory	1957 allocations	1958 allocations	Estimated 1959 allocations
Alabama	$1,150,125	$1,157,175	$1,144,725
Arizona	566,725	578,400	576,450
Arkansas	1,047,925	1,030,100	1,024,975
California	2,053,325	2,052,475	2,048,825
Colorado	624,300	636,675	635,700
Connecticut	628,275	626,575	624,100
Delaware	350,350	346,450	336,325
District of Columbia	445,650	453,675	454,575
Florida	910,775	907,550	899,575
Georgia	1,137,700	1,136,150	1,128,600
Idaho	576,475	593,325	592,125
Illinois	1,752,825	1,749,050	1,749,450
Indiana	1,027,400	1,029,725	1,039,850
Iowa	873,075	882,450	883,875
Kansas	733,550	749,150	758,325
Kentucky	1,067,225	1,075,525	1,073,825
Louisiana	993,975	993,350	986,350
Maine	627,125	634,650	625,725
Maryland	750,350	750,000	754,525
Massachusetts	1,137,125	1,126,450	1,123,575
Michigan	1,389,675	1,386,275	1,394,550
Minnesota	929,450	923,250	929,175
Mississippi	1,180,375	1,172,550	1,162,925
Missouri	1,059,775	1,060,950	1,063,350
Montana	503,650	503,325	512,475
Nebraska	661,075	674,150	683,850
Nevada	325,775	330,200	335,325
New Hampshire	543,150	529,825	521,925
New Jersey	1,113,600	1,110,125	1,109,775
New Mexico	631,850	627,850	631,350
New York	2,749,675	2,746,550	2,744,325
North Carolina	1,270,675	1,272,425	1,260,950
North Dakota	702,575	676,250	671,725
Ohio	1,653,325	1,655,100	1,658,600
Oklahoma	865,825	858,725	862,175
Oregon	647,125	651,575	657,300
Pennsylvania	2,097,650	2,098,725	2,102,975
Rhode Island	520,500	509,600	514,475
South Carolina	995,100	1,007,525	1,022,525
South Dakota	660,775	664,050	676,700
Tennessee	1,136,050	1,130,075	1,129,400
Texas	1,716,475	1,716,350	1,714,800
Utah	591,175	588,525	591,875
Vermont	575,325	556,650	545,600
Virginia	1,027,450	1,025,525	1,019,100
Washington	755,850	756,050	762,825
West Virginia	891,525	904,200	900,000
Wisconsin	971,725	974,625	981,025
Wyoming	440,375	450,750	458,050
Alaska	426,525	425,100	425,275
Hawaii	496,100	504,325	513,475
Puerto Rico	1,185,550	1,177,725	1,168,100
Virgin Islands	830,000	822,175	812,550
Total	50,000,000	50,000,000	50,000,000

PREPARED STATEMENT OF CHIEF, DIVISION OF SANITARY ENGINEERING SERVICES

Mr. Chairman and members of the committee, the Federal Water Pollution Control Act of 1956 authorizes grants to States, municipalities, and interstate and intermunicipal agencies for construction of necessary waste treatment works. $50 million per year is authorized, with the aggregate of all appropriations not to exceed $500 million. This request is for $45 million with provision for allotments to the States on the basis of $50 million.

Analysis of applications as of January 1, 1958, indicated that grant offers had been made to cities for a total of 828 projects requiring grants of $69.1 million, the total cost of the projects being $353.7 million. In addition, States and cities have in process of preparation applications for 961 projects requiring $94.7 million in grants. The total cost of the latter projects will be $707.5 million.

To summarize, as of January 1, 1958, a total of 1,789 applications for projects have been made or are in process of being made by States and cities for total grants of $163.8 million. These applications represent $1,061.2 million in construction costs.

The appropriations for fiscal years 1957 and 1958 will provide grants for the construction of approximately 1,140 projects while the request for fiscal year 1959 will take care of about 540 additional projects.

HOUSE ACTION

Senator HILL. I believe you will also address yourself to the "Grants for waste treatment works construction."

Mr. HOLLIS. Yes, sir.

Senator HILL. I notice that the House allowed the full budget estimate on that of $45 million.

Mr. HOLLIS. They allowed $45 million with authorization to apportion between the States as required in the act at the $50 million level.

ALLOTMENT OF FUNDS

Senator HOLLIS. Last year you had $45 million; is that correct?

Mr. HOLLIS. Yes, sir; and allotted it based on $50 million.

Senator HILL. In 1957 you had the full $50 million?

Mr. HOLLIS. Yes, sir.

Senator HILL. Did the applications take up the full $50 million?

Mr. HOLLIS. Senator, that requires just a moment of explanation.

Senator HILL. Of course, I realize you were beginning the program then.

Mr. HOLLIS. Yes, sir.

Senator HILL. That was your first year?

Mr. HOLLIS. We have now been in operation about 16 months. The act itself specifies that the money be apportioned between the States on the formula basis. In quick summary, we have had for the 2 years now $95 million authorized to be alloted at a $100 million level. We have actually made grants of $79 million. There are now grant requests in for $144 million. The difference between the two figures is that half of the States have more requests than they have apportioned money to cover and on the other hand the Territories and a few States are not using all of their apportionment.

The Virgin Islands and Alaska, for example, have not used any of their funds, so that the balance in funds is not a usable balance since it is earmarked for specific States and Territories.

Senator HILL. Do you want to say something, Mr. Kelly?

DEPENDENCE UPON STATE ACTION

Mr. KELLY. Mr. Chairman, I think the language we have here is very similar to the language we have in the Office of Vocational Rehabilitation in that it gives an allotment for distribution to States and an appropriation which is the estimate.

If all States wanted to use their allotment it would be necessary for us to seek the difference in funds between the $45 million and $50 million.

It is our present estimate that we now would not have to seek that.

Senator HILL. I am familiar with the language. We have it in other Federal grants activities.

I have here a table of applicants which I will put in the record at this point.

(The table referred to follows:)

Complete listing—All projects approved under sec. 6 of the Federal Water Pollution Control Act

ALABAMA, STATE ALLOTMENT, $2,307,300

Status	Location	Name of applicant	Population code	Description	Type construction	Estimated eligible project cost	Federal grant offer	Project approved	
								Month	Year
	Total					$374,076,368	$79,124,279.75		
1	Athens	City of Athens	3	7	1	467,000	140,100.00	March	1958
1	Auburn	City of Auburn	4	7	1	828,350	248,505.00	June	1957
2	Clanton	City of Clanton	2	6	1	257,000	77,100.00	April	1957
2	Decatur	City of Decatur	4	7	1	1,512,500	250,000.00	November	1957
2	Enterprise	City of Enterprise	3	5	1	459,014	137,704.00	August	1957
1	Eutaw	City of Eutaw	1	9	1	75,250	22,575.00	December	1957
3	Guntersville	City of Guntersville	1	5	1	392,875	117,862.71	February	1957
1	Hartselle	City of Hartselle	2	1	2	86,000	25,800.00	March	1958
1	Huntsville	City of Huntsville	4	1	1	1,750,000	250,000.00	October	1957
1	Jefferson County	County Commissioners	5	1	1	2,000,000	250,000.00	August	1957
2	Mobile	Board of Water and Sewer Commissioners	7	1	1	2,208,477	250,000.00	February	1957
1	Northport	City of Northport	2	6	1	333,000	99,900.00	August	1957
2	Troy	City of Troy	3	7	1	570,000	171,000.00	January	1957
1	Tuscaloosa	City of Tuscaloosa	5	1	1	1,303,000	250,000.00	June	1957
	State total					12,242,466	2,290,546.71		

ARIZONA, STATE ALLOTMENT, $1,145,125

1	Avondale	Town of Avondale	2	9	1	$278,000	$83,390.00	December	1957
1	Casa Grande	City of Casa Grande	2	9	1	358,000	107,400.00	April	1957
2	Glendale	City of Glendale	3	8	1	409,140	122,741.98	October	1957
2	Phoenix	City of Phoenix	6	6	1	600,000	180,000,00	do	1957
1	Scottsdale	Town of Scottsdale	1	6	1	508,684	152,605.22	do	1957
1	Show Low	City of Show Low	1	9	1	62,000	18,600.00	July	1957
1	Sierra Vista	Town of Sierra Vista	1	6	1	135,321	40,596.00	May	1957
3	Tempe	City of Tempe	3	1	7	239,266	71,146.51	January	1957
2	Tucson	Sanitary District No. 1, Pima County	5	3	1	315,592	94,677.55	March	1957
1	do	do	5	3	1	102,138	30,641.42	January	1958
1	Wickenburg	Town of Wickenburg	1	1	2	22,230	6,600.00	October	1957
2	Winslow	City of Winslow	3	6	1	395,270	118,581.00	March	1957
	State total					3,425,641	1,026,979.68		

ARKANSAS, STATE ALLOTMENT, $2,078,025

2	Benton Hospital	Arkansas State hospital	3	1	1	$123,783	$42,211.50	July	1957
1	Bentonville	City of Bentonville	2	2	1	80,000	24,000.00	January	1958
1	College Heights	Arkansas Agricultural and Mechanical College	1	7	1	66,355	19,906.59	February	1958
1	Elaine	City of Elaine	1	5	1	69,899	20,969.75	October	1957
1	Hot Springs	City of Hot Springs	5	3	1	289,969	86,990.00	July	1957
1	Huttig	Town of Huttig	1	5	1	44,029	13,208.70	do	1957
1	Jacksonville	City of Jacksonville	1	5	1	249,992	74,697.75	do	1957
1	Jonesboro	City water, light	4	7	1	625,000	187,500.00	do	1957
2	Lake Village	City of Lake Village	1	5	1	153,498	46,044.88	November	1957
1	Little Rock	Sanitary sewer system	6	6	1	2,121,800	250,000.00	July	1957
2	Malvern	City of Malvern	3	7	4	59,482	14,088.81	April	1957
3	Marshall	City of Marshall	1	6	1	62,666	15,809.29	June	1957
1	McGehee	City of McGehee	2	1	1	287,905	75,002.61	February	1957
2	Mena	City of Mena	2	7	1	352,479	61,253.70	do	1957
1	Morrilton	City of Morrilton	3	9	1	245,410	73,623.00	August	1957
2	Murfreesboro	City of Murfreesboro	1	9	4	13,360	4,008.00	July	1957
1	Pangburn	City of Pangburn	1	5	1	34,223	10,266.90	January	1958
2	Parkin	City of Parkin	1	7	4	18,742	5,622.65	September	1957
1	Russellville	City of Russellville	3	9	1	58,441	17,532.00	July	1957
2	Searcy	Board of public utilities	3	7	4	139,732	41,900.00	do	1957
1	Sparkman	Town of Sparkman	1	6	1	54,410	16,323.00	November	1957
2	Springdale	City of Springdale	3	1	2	210,000	63,000.00	March	1957
1	Warren	City of Warren	3	7	1	336,814	101,044.25	December	1957
1	Weiner	City of Weiner	1	5	1	48,894	14,668.47	September	1957
1	West Helena	City of West Helena	3	7	1	279,469	83,840.72	do	1957
	State total					6,026,352	1,363,512.57		

CALIFORNIA, STATE ALLOTMENT, $4,105,800

2	Alameda	City of Alameda	6	3	1	$43,559	$13,067.00	May	1957
2	Arcata	City of Arcata	2	1	7	340,000	102,000.00	do	1957
1	Benicia	City of Benicia	3	5	1	1,072,000	250,000.00	March	1958
2	Camarillo	Camarillo Sanitary District	3	6	1	613,129	112,711.00	May	1957
2	Crescent City	City of Crescent City	1	8	1	342,000	90,600.00	June	1957
1	Dana Point	Dana Point Sanitary District	1	5	1	384,165	103,500.00	March	1957
2	Davis	City of Davis	2	5	2	234,620	70,386.00	May	1957
2	Eureka	City of Eureka	4	3	1	46,900	14,000.00	April	1957
2	Fairfield	Fairfield-Suisun District	2	1	1	516,960	155,087.95	March	1957
3	Kings Beach	North Tahoe Public Utility District	2	9	4	200,700	60,210.00	April	1957
2	Los Altos	City of Los Altos	3	5	1	748,370	197,796.05	May	1957
3	Martinez	Contra Costa County Sanitary District	2	7	6	326,500	97,619.47	April	1957
1	Mill Valley	City of Mill Valley	3	1	2	582,800	174,800.00	November	1957
2	Napa	Yountville Sanitation District	1	1	1	106,753	32,025.00	March	1957
2	Richmond	City of Richmond	6	6	1	1,533,000	250,000.00	do	1957
2	Rodeo	Rodeo Sanitary District	3	1	1	347,000	104,100.00	May	1957
2	Salinas	City of Salinas	4	5	3	889,528	190,472.00	March	1958

Complete listing—All projects approved under sec. 6 of the Federal Water Pollution Control Act—Continued

CALIFORNIA, STATE ALLOTMENT, $4,105,800—Continued

Status	Location	Name of applicant	Population code	Description	Type construction	Estimated eligible project cost	Federal grant offer	Project approved	
								Month	Year
2	San Diego	Vista Sanitation District	3	1	2	$132,300	$39,690.00	April	1957
2	do	Spring Valley Sanitary District	3	1	1	290,162	87,048.00	May	1957
2	Santa Cruz	City of Santa Cruz	4	4	3	222,650	66,795.00	do	1957
2	Sunnyvale	City of Sunnyvale	3	1	2	160,273	48,081.00	April	1957
2	Tracy	City of Tracy	2	1	2	262,500	78,750.00	do	1957
2	Ukiah	Ukiah Valley Sanitary District	2	3	1	378,736	113,620.00	do	1957
2	do	City of Ukiah	3	1	1	901,881	250,000.00	do	1957
2	Waterford	Waterford Community Service District	1	7	1	81,361	24,408.00	May	1957
2	Weaverville	Weaverville Sanitation District	1	6	1	151,740	45,000.00	do	1957
2	Willits	City of Willits	2	1	7	157,362	47,208.00	November	1957
	State total					11,066,949	2,818,974.47		

COLORADO, STATE ALLOTMENT, $1,260,975

3	Altura	Altura Sanitation District	2	9	4	$22,952	$6,885.61	September	1957
2	Aspen	Aspen Sanitary District	1	1	1	171,547	45,332.00	April	1957
2	Boulder	City of Boulder	4	1	1	1,080,000	250,000.00	January	1957
2	Brighton	City of Brighton	2	1	3	265,000	79,500.00	July	1957
1	Brush	City of Brush	1	1	1	186,438	55,931.62	September	1957
2	Byers	Byers Water Sanitary District	1	9	1	29,270	8,781.24	October	1957
2	Craig	City of Craig	2	9	1	60,383	18,114.92	do	1957
1	Craig Sanitary District	West Craig Water and Sanitation	2	4	1	23,048	6,914.43	November	1957
3	Del Norte	Town of Del Norte	1	9	1	51,280	12,753.00	April	1957
2	Derby	South Adams Water and Sanitary District	4	1	1	585,764	97,849.50	May	1957
2	Dove Creek	Dove Creek Sanitary District	1	9	1	84,709	25,412.70	November	1957
2	Grand Junction	City of Grand Junction	4	6	7	705,409	211,622.74	May	1957
1	Julesburg	Town of Julesburg	1	1	1	126,493	37,948.17	August	1957
1	Lamar	City of Lamar	3	9	1	255,892	56,454.38	December	1957
2	Las Animas	City of Las Animas	2	9	1	91,080	27,144.02	August	1957
1	Naturita	Town of Naturita	1	1	1	47,920	14,376.00	September	1957
1	Pueblo	City of Pueblo	6	1	2	1,032,469	250,000.00	October	1957
2	Salida	City of Salida	2	6	1	281,358	55,896.00	do	1957
	State total					5,101,012	1,260,916.33		

CONNECTICUT, STATE ALLOTMENT, $1,254,850

2	New Haven	City of New Haven	7	1	7	$228,500	$68,500.00	May	1957
2	New Milford	Town of New Milford	2	5	1	802,000	240,600.00	February	1958
2	Norwich	City of Norwich	4	7	4	1,777,550	260,000.00	do	1957
1	Southington	Town of Southington	3	1	1	904,580	250,000.00	August	1957
2	Willimantic	City of Willimantic	4	7	1	707,885	212,365.24	March	1957
1	Windsor Locks	Town of Windsor Locks	3	5	1	508,000	152,400.00	January	1958
	State total					4,928,515	1,173,865.24		

DELAWARE, STATE ALLOTMENT, $696,800

1	Georgetown	Town council, Georgetown	1	1	2	$98,810	$29,643.00	July	1957
1	Laurel	Town of Laurel	2	5	1	623,390	187,017.00	January	1958
1	Lewes	Board of public works	2	5	1	778,880	204,510.00	December	1957
1	Milton	Town of Milton	1	7	1	267,338	80,201.40	February	1958
1	Seaford	City of Seaford	2	6	1	511,750	153,525.00	May	1957
	State total					2,280,168	654,896.40		

DISTRICT OF COLUMBIA, ALLOTMENT, $899,325

2	District of Columbia	Department of Sanitary Engineering	9	1	2	$5,904,928	$250,000.00	June	1957
1	do	do	9	4	3	375,000	112,500.00	August	1957
	State total					6,279,928	362,500.00		

Complete listing—All projects approved under sec. 6 of the Federal Water Pollution Control Act—Continued

FLORIDA, STATE ALLOTMENT, $1,818,325

Status	Location	Name of applicant	Population code	Description	Type construction	Estimated eligible project cost	Federal grant offer	Project approved	
								Month	Year
1	Apalachicola	City of Apalachicola	2	7	1	$252,548	$65,100.00	May	1957
1	Belle Glade	City of Belle Glade	3	6	1	758,838	207,556.00	April	1957
1	Belleview	Town of Belleview	1	6	1	134,625	39,000.00	May	1957
1	Callahan	City of Callahan	1	1	1	129,300	38,790.00	do	1957
1	Cocoa Beach	Town of Cocoa Beach	1	1	1	325,000	97,500.00	October	1957
2	Eau Gallie	City of Eau Gallie	1	7	1	351,665	105,499.50	December	1957
2	Fort Lauderdale	City of Fort Lauderdale	5	6	1	930,687	250,000.00	do	1957
1	Inverness	City of Inverness	1	7	1	211,557	63,467.00	September	1957
2	Long Key	Long Key sewer district	3	5	1	602,736	180,820.94	November	1957
1	Lynn Haven	City of Lynn Haven	1	7	1	211,090	63,327.00	August	1957
1	Milton	Town of Milton	1	1	1	174,430	52,329.00	January	1958
2	Naples	City of Naples	1	6	1	288,054	77,640.00	April	1957
1	New Port Richey	City of New Port Richey	1	7	1	245,000	73,500.00	December	1957
1	Okeechobee	City of Okeechobee	1	7	1	342,616	71,160.00	May	1957
1	Perry	City of Perry	2	7	1	645,300	193,590.00	December	1957
1	Wauchula	City of Wauchula	2	5	1	517,000	155,100.00	April	1957
1	Wildwood	City of Wildwood	1	1	6	90,000	27,000.00	do	1957
	State total					6,210,446	1,761,379.44		

GEORGIA, STATE ALLOTMENT, $2,273,850

1	Albany	City of Albany	5	1	1	$1,380,000	$250,000.00	August	1957
1	Barnesville	City of Barnesville	2	5	1	317,756	79,110.00	April	1957
2	Baxley	City of Baxley	2	6	1	323,400	97,020.00	February	1957
1	Blackshear	City of Blackshear	1	6	1	138,600	41,580.00	June	1957
1	Blakely	City of Blakely	2	1	2	120,000	36,000.00	March	1957
1	Buena Vista	City of Buena Vista	1	7	1	134,285	40,285.00	do	1957
1	College Park	City of College Park	4	1	1	442,000	126,000.00	do	1958
1	Folkston	City of Folkston	1	6	1	182,550	46,359.00	June	1957
1	Fulton County	Atlanta Fulton County	8	7	1	2,610,000	250,000.00	March	1958
2	Jonesboro	Clayton County	4	5	1	1,096,500	250,000.00	April	1957
1	Kingsland	City of Kingsland	1	6	1	103,567	31,000.00	October	1957
2	Lawrenceville	City of Lawrenceville	2	6	1	259,685	77,905.50	February	1957
1	Smyrna	City of Smyrna	1	8	1	242,430	72,729.00	June	1957
1	Statesboro	City of Statesboro	3	5	1	688,600	195,760.00	January	1958
1	Vidalia	City of Vidalia	3	6	1	301,410	90,423.00	February	1958
2	Washington	City of Washington	2	7	1	267,100	80,100.00	March	1957
1	Waycross	City of Waycross	4	1	1	1,200,000	250,000.00	June	1957
	State total					9,807,883	2,014,271.50		

IDAHO, STATE ALLOTMENT, $1,169,800

2	Cottonwood	Village of Cottonwood	1	9	1	$46,560	$13,968.00	March	1957
1	Idaho Falls	City of Idaho Falls	4	5	1	1,518,830	250,000.00	September	1957
1	Kooskia	Village of Kooskia	1	5	1	56,467	16,940.00	January	1958
1	Lewiston	City of Lewiston	4	7	1	832,100	249,000.00	March	1957
1	Moscow	City of Moscow	4	7	2	253,551	75,840.000	do	1957
1	Payette	City of Payette	2	5	1	256,521	76,956.30	February	1958
1	Pocatello	City of Pocatello	1	5	1	1,176,000	250,000.00	October	1957
2	Priest River	City of Priest River	1	5	1	106,020	28,150.36	May	1957
2	Sandpoint	City of Sandpoint	2	6	1	249,937	74,981.37	July	1957
	State total					4,495,986	1,035,836.03		

ILLINOIS, STATE ALLOTMENT, $3,501,875

1	Benld	City of Benld	1	1	1	$126,830	$38,049.00	December	1957
2	Bourbannais	Village of Bourbannais	1	7	1	220,000	66,000.00	April	1957
2	Charleston	City of Charleston	3	7	4	415,000	124,500.00	March	1957
2	Danville	Danville San Dist	5	7	4	1,259,000	250,000.00	May	1957
2	Effingham	City of Effingham	3	5	4	456,948	137,084.70	March	1957
2	Farmer City	Farmer City	1	7	5	179,200	54,060.00	do	1957
2	Geneseo	City of Geneseo	2	1	1	649,432	83,166.07	do	1958
2	Kewanee	City of Kewanee	4	1	7	275,068	82,520.00	September	1957
2	Lake Villa	Village of Lake Villa	1	1	1	161,111	48,333.32	April	1957
2	Lansing	Village of Lansing	3	1	4	731,152	219,345.60	do	1957
1	Litchfield	City of Litchfield	3	7	7	200,000	60,000.00	March	1958
2	Manteno	Village of Manteno	1	5	1	256,244	76,873.00	April	1957
2	Mokena	Village of Mokena	1	6	1	231,029	69,308.70	do	1957
1	Mount Sterling	City of Mount Sterling	1	5	4	192,612	52,890.60	February	1958
1	Murphysboro	City of Murphysboro	3	7	1	691,827	184,475.10	March	1958
2	O'Fallon	City of O'Fallon	2	1	6	125,000	37,500.00	do	1957
2	Ottawa	City of Ottawa	4	5	1	1,677,000	250,000.00	do	1957
1	Peotone	Village of Peotone	1	1	1	180,900	40,000.00	December	1957
2	Springfield	Spring Sewer District	6	1	2	997,645	250,000.00	do	1957
1	Thornton	Village of Thornton	1	1	6	189,782	56,934.00	March	1958
1	Vermilion County	Westville Belgium Sanitary District	3	7	1	563,250	168,975.00	do	1958
3	Watseka	City of Watseka	2	5	1	428,245	128,473.40	do	1957
2	Wilmington	City of Wilmington	2	7	4	289,740	86,921.85	December	1957
2	Wood Dale	Wood Dale	1	5	1	318,894	95,668.32	May	1957
2	Yorkville-Bristol	Yorkville-Bristol Sanitary District	1	7	1	207,000	62,000.00	March	1957
	State total					11,022,909	2,723,078.66		

Complete listing—All projects approved under sec. 6 of the Federal Water Pollution Control Act—Continued

INDIANA STATE ALLOTMENT, $2,057,125

Status	Location	Name of applicant	Population code	Description	Type construction	Estimated eligible project cost	Federal grant offer	Project approved	
								Month	Year
1	Alexandria	City of Alexandria	3	5	1	$668,160	$226,375.23	February	1957
2	Decatur	City of Decatur	3	7	4	1,176,000	250,000.00	do	1957
1	Evansville	City of Evansville	7	6	2	3,265,000	243,624.90	December	1957
2	Fairmount	Town of Fairmount	2	5	1	322,167	96,649.89	February	1957
2	Fremont	Town of Fremont	1	9	1	76,500	29,325.00	do	1957
2	Galveston	Town of Galveston	1	7	1	178,734	53,620.00	November	1957
2	Huntingburg	City of Huntingburg	2	7	1	334,000	100,200.00	February	1957
2	Jonesboro	Town of Jonesboro	1	5	1	295,937	88,781.04	do	1957
2	Lagrange	Town of Lagrange	1	7	1	212,800	63,840.00	do	1957
2	Monon	Town of Monon	1	5	1	117,056	39,278.00	do	1957
2	Morristown	Town of Morristown	1	9	1	34,566	10,369.96	do	1957
1	New Albany	City of New Albany	5	6	1	3,340,000	250,000.00	November	1957
1	Paoli	Town of Paoli	2	5	1	450,808	135,242.28	do	1957
1	Petersburg	City of Petersburg	2	7	3	324,426	97,237.82	do	1957
2	Tipton	City of Tipton	3	1	4	276,702	83,010.88	February	1957
1	Vincennes	City of Vincennes	4	7	1	840,000	250,000.00	November	1957
2	Wincester	City of Winchester	3	1	2	102,580	39,570.00	February	1957
	State total					12,015,436	2,057,125.00		

IOWA, STATE ALLOTMENT, $1,755,525

1	Alton	City of Alton	1	9	1	$57,000	$17,000.00	April	1957
2	Bedford	City of Bedford	1	1	2	130,000	35,400.00	February	1957
3	Birmingham	Town of Birmingham	1	9	1	15,432	4,629.63	March	1957
1	Bloomfield	City of Bloomfield	2	1	2	118,442	35,530.00	November	1957
1	Burlington	City of Burlington	5	1	1	2,164,100	250,000.00	October	1957
2	Colfax	City of Colfax	1	6	1	166,737	41,648.78	September	1957
2	Conrad	Town of Conrad	1	1	1	99,800	29,307.00	do	1957
2	Dubuque	City of Dubuque	5	1	1	1,571,000	250,000.00	do	1957
2	Eagle Grove	City of Eagle Grove	2	1	1	220,000	56,014.75	January	1957
2	Estherville	City of Estherville	3	1	3	300,000	75,900.00	February	1957
3	Fonda	Town of Fonda	1	1	2	77,987	21,527.40	do	1957
2	Hopkinton	Town of Hopkinton	1	1	1	197,289	24,237.34	January	1958
2	Ireton	Town of Ireton	1	1	1	79,000	23,214.00	October	1957
2	Kellogg	Town of Kellogg	1	1	1	88,520	24,202.20	do	1957
1	Lemars	City of Lemars	3	5	1	347,000	104,000.00	January	1957
1	Lohrville	Town of Lohrville	1	1	1	86,000	23,599.50	October	1957
3	Mount Ayr	Mount Ayr	1	6	4	145,146	28,573.82	May	1957

1	New London	City of New London	1	6	1	129,975	35,979.09	February	1957
1	Orange City	City of Orange City	1	1	2	128,775	38,632.50	October	1957
2	Ottumwa	City of Ottumwa	5	5	1	1,770,300	250,000.00	February	1957
2	Sibley	Sibley	2	1	3	300,000	75,657.60	January	1957
2	Sioux Rapids	City of Sioux Rapids	1	1	1	101,000	22,776.02	February	1957
1	Sioux Center	Town of Sioux Center	1	1	1	258,000	77,400.00	September	1957
2	Springville	Springville	1	6	1	55,920	15,426.00	January	1957
2	Sumner	Town of Sumner	1	1	1	236,000	43,980.00	December	1957
3	Villisca	Villisca	1	1	1	126,633	33,103.50	January	1957
3	Washington	City of Washington	3	1	2	236,176	17,835.11	December	1957
1	Webster County	Webster County Home	5	3	1	56,051	16,800.00	March	1957
1	Wellsburg	Town of Wellsburg	1	1	1	101,640	28,962.00	October	1957
	State total					9,363,923	1,701,336.24		

KANSAS, STATE ALLOTMENT $1,482,700

2	Arkansas City	Arkansas City	4	7	1	$1,271,000	$238,100.00	February	1957
3	Atwood	City of Atwood	1	9	1	75,000	19,212.75	January	1957
3	Benton	Town of Benton	1	9	1	66,400	17,070.00	February	1957
2	Bison	City of Bison	1	9	1	43,000	12,900.00	December	1957
2	Dodge City	City of Dodge City	4	1	4	595,000	168,885.00	August	1957
3	Douglas	Douglas	1	1	1	78,797	18,351.78	January	1957
3	Elk City	Elk City	1	9	1	131,300	15,712.67	May	1957
2	Elkhart	City of Elkhart	1	9	1	54,036	16,210.95	July	1957
2	Ellinwood	City of Ellinwood	2	1	1	203,982	60,982.86	September	1957
1	Emporia	City of Emporia	4	1	2	675,170	133,500.00	October	1957
2	Garden City	City of Garden City	3	1	1	650,000	115,723.50	November	1957
2	Gardner	City of Gardner	1	1	2	100,000	32,994.47	July	1957
3	Garfield	City of Garfield	1	6	1	48,602	12,851.09	March	1957
2	Haviland	City of Haviland	1	1	1	88,000	26,400.00	November	1957
2	Hesston	City of Hesston	1	1	3	90,000	24,090.00	August	1957
2	Horton	City of Horton	1	5	1	196,400	49,170.30	January	1957
2	Johnson County	Indian Creek Sewer District No. 1	1	1	1	539,625	161,887.50	August	1957
3	Leonora	Lenora	1	6	1	60,000	16,725.00	January	1957
3	Lewis	City of Lewis	1	6	1	52,000	10,888.95	March	1957
3	Mullinville	Mullinville	1	9	1	46,159	13,000.85	January	1957
3	Nickerson	Nickerson	1	6	1	99,423	22,335.00	do	1957
2	Olathe	City of Olathe	3	1	1	524,000	142,800.00	do	1957
2	Ransom	City of Ransom	1	9	1	65,000	15,900.00	August	1957
2	Rose Hill	Town of Rose Hill	1	6	1	110,295	29,239.89	March	1957
2	Strong City	Strong City	1	9	1	71,500	19,791.04	January	1957
2	Valley Center	Valley Center	1	1	5	140,070	32,999.40	February	1957
3	Waterville	City of Waterville	1	6	1	47,220	13,347.00	January	1957
3	Wellsville	City of Wellsville	1	1	1	132,100	36,015.00	do	1957
	State total					6,254,079	1,477,085.00		

Complete listing—All projects approved under sec. 6 of the Federal Water Pollution Control Act—Continued

KENTUCKY, STATE ALLOTMENT, $2,142,750

Status	Location	Name of applicant	Population code	Description	Type construction	Estimated eligible project cost	Federal grant offer	Project approved	
								Month	Year
1	Bardstown	City of Bardstown	2	1	1	$341,000	$102,300.00	December	1957
1	Carrollton	City of Carrollton	2	7	1	315,000	94,500.00	January	1958
1	Cumberland	City of Cumberland	2	5	1	290,000	87,000.00	do	1958
1	Eminence	City of Eminence	1	5	1	120,010	33,978.00	May	1957
1	Flemingsburg	City of Flemingsburg	1	7	1	195,000	58,500.00	December	1957
1	Greenville	City of Greenville	2	5	1	185,845	55,543.00	June	1957
1	Hazard	City of Hazard	3	6	1	687,500	206,250.00	March	1958
2	Hopkinsville	City of Hopkinsville	4	6	4	750,904	135,301.00	do	1957
3	Jeffersontown	Jeffersontown community	1	6	1	426,282	102,572.91	do	1957
1	La Grange	City of La Grange	1	7	1	170,460	51,138.00	September	1957
1	Louisville	Louisville-Jefferson County Service District	8	3	1	1,400,000	250,000.00	January	1958
3	Madisonville	City of Madisonville	4	6	1	990,665	139,118.00	May	1957
2	Morehead	Morehead Utility Plant Board	2	1	4	423,500	127,050.00	do	1957
1	Muldraugh	City of Muldraugh	1	8	1	81,700	24,510.00	August	1957
2	Murray	City of Murray	3	1	2	109,000	32,700.00	June	1957
2	Owensboro	City of Owensboro	5	7	1	2,649,545	250,000.00	March	1957
1	Owenton	City of Owenton	1	1	2	19,875	5,962.00	September	1957
1	West Liberty	City of West Liberty	1	7	1	127,350	38,205.00	July	1957
	State total					9,283,636	1,794,627.91		

LOUISIANA, STATE ALLOTMENT, $1,987,325

2	Abbeville	City of Abbeville	1	1	2	$336,981	$101,094.48	October	1957
2	Calcasieu Parish	Police Jury Sanitary District No. 2	1	1	1	104,200	38,548.78	March	1957
2	Church Point	Town of Church Point	2	5	1	275,629	82,688.81	August	1957
1	Covington	City of Covington	3	1	1	251,950	75,585.00	March	1958
2	Farmerville	Town of Farmerville	1	1	1	110,158	44,521.24	November	1957
2	Franklinton	Town of Franklinton	1	1	1	69,183	20,754.95	September	1957
1	Gonzales	Town of Gonzales	1	7	1	431,157	100,000.00	February	1958
2	Jefferson 1	Jefferson Parish	6	1	1	893,874	250,000.00	January	1957
1	Leesville	Town of Leesville	2	1	2	125,400	37,620.00	December	1957
2	Lockport	Town of Lockport	1	6	1	285,274	70,410.53	March	1957
2	Mooringsport	Town of Mooringsport	1	6	1	83,982	25,194.85	do	1957
1	New Iberia	City of New Iberia	4	1	3	887,000	250,000.00	August	1957
3	Patterson	Sewage District No. 1	2	1	1	113,133	31,239.39	February	1957
1	Slidell	Town of Slidell	2	7	1	446,675	134,002.61	August	1957
2	St. Bernard	St. Bernard Sewage District No. 1	3	7	4	491,400	142,770.00	March	1957
3	Tallulah	Village of Tallulah	3	1	1	401,095	105,039.04	February	1957
2	Terrebonne Parish	Terrebonne Parish Sanitary District No. 12	1	9	1	59,992	17,994.00	January	1958
1	Vinton	Town of Vinton	1	1	1	196,805	59,040.00	August	1957
1	Westlake	Town of Westlake	1	6	1	250,000	75,000.00	do	1957
2	Winnfield	City of Winnfield	3	7	1	450,000	125,610.04	May	1957
	State total					6,263,888	1,787,113.72		

MAINE, STATE ALLOTMENT, $1,261,775

1	Kennebunk	Kennebunk Sewer District	2	7	1	$735,000	$220,500.00	May	1957
2	Saco	Saco Sewer District	1	7	1	116,230	34,869.00	August	1957
1	Winthrop	Winthrop Water District	1	7	1	129,000	38,700.00	July	1957
	State total					980,230	294,069.00		

MARYLAND, STATE ALLOTMENT, $1,500,350

1	Baltimore	City of Baltimore	9	3	1	$990,090	$198,000.00	February	1958
1	Cabin John	Washington Suburban Sanitary Commission	1	3	1	129.720	35,383.00	April	1957
1	Emmitsburg	Town of Emmitsburg	1	7	1	339,185	67,837.00	January	1958
1	Gaithersburg	Washington Suburban Sanitary Commission	2	3	1	997,300	148,000.00	February	1958
3	Glen Burnie	Anne Arundel Sanitary Commission	2	3	1	497,997	142,925.02	do	1957
2	Hagerstown	City of Hagerstown	5	1	7	308,393	92,517.00	do	1957
2	Laurel	Washington Suburban Sanitary Commission	2	7	1	1,264,326	250,000.00	December	1957
2	Leonardtown	City of Leonardtown	1	1	1	158,400	47,520.00	February	1957
1	North Beach	Town of North Beach	1	5	1	250,276	75,082.00	June	1957
1	Princess Anne	Princess Anne Water Sewer Authority	1	5	1	107,000	32,100.00	March	1957
2	Rockville	City of Rockville	3	3	1	18,690	3,738.00	December	1957
3	do	Washington Suburban Sanitary Commission	4	3	1	1,000,480	250,000.00	April	1957
1	Salisbury	City of Salisbury	4	3	1	564,088	112,818,00.	November	1957
2	Sligo Branch	Washington Suburban Sanitary Commission	6	3	2	137,930	27,486.00	October	1957
	State total					6,763,785	1,483,406.02		

Complete listing—All projects approved under sec. 6 of the Federal Water Pollution Control Act—Continued

MASSACHUSETTS, STATE ALLOTMENT, $2,263,575

Status	Location	Name of applicant	Population code	Description	Type construction	Estimated eligible project cost	Federal grant offer	Project approved	
								Month	Year
2	Agawam	Town of Agawam	4	3	1	$154,191	$46,257.30	April	1957
3	Barnstable	Town of Barnstable	4	1	3	115,138	34,541.62	do	1957
1	Billerica	County of Middlesex	2	1	1	122,700	36,810.00	November	1957
3	East Longmeadow	Town of East Longmeadow	2	1	2	17,989	2,878.84	February	1957
1	Easthampton	Town of Easthampton	4	6	1	515,000	154,500.00	do	1957
1	Ipswich	Town of Ipswich	2	5	1	484,360	145,300.00	do	1958
2	Longmeadow	Town of Longmeadow	3	5	1	615,600	184,680.00	March	1957
1	Marshfield	Board of Sewer Commissioners	2	6	1	110,000	33,000.00	January	1958
1	Milford	Town of Milford	4	1	7	350,000	105,000.00	do	1958
1	Norfolk County	Metropolitan District Commission	5	3	1	2,136,725	250,000.00	December	1957
1	Northampton	City of Northampton	5	1	1	900,000	250,000.00	April	1957
	State total					5,521,703	1,242,967.76		

MICHIGAN, STATE ALLOTMENT, $2,775,950

2	Almont	Village of Almont	1	1	1	$147,856	$44,356.97	November	1957
2	Brighton	City of Brighton	1	7	4	221,442	66,432.68	do	1957
1	Coloma	City of Coloma	1	5	1	116,545	34,963.65	January	1958
2	Corunna	City of Corunna	1	6	1	198,605	59,581.64	February	1957
1	Dearborn	City of Dearborn	6	3	1	300,000	90,000.00	January	1958
2	Dundee	Village of Dundee	1	5	1	370,900	111,270.00	February	1957
2	Elberta	Village of Elberta	1	1	1	84,000	25,200.00	April	1957
2	Flushing	City of Flushing	1	7	1	427,204	128,161.10	June	1957
1	Fowler	Village of Fowler	1	1	7	36,000	10,800.00	January	1958
2	Grand Rapids	City of Grand Rapids	7	1	2	516,045	154,813.50	May	1957
2	Imlay City	Village of Imlay City	1	7	1	318,754	95,626.22	December	1957
1	Iron River	City of Iron River	2	1	1	199,425	59,827.50	November	1957
2	Ironwood	City of Ironwood	4	7	1	629,000	188,700.00	June	1957
2	L'Anse	Village of L'Anse	1	7	1	245,965	73,789.50	April	1957
2	Lapeer	City of Lapeer	3	7	1	704,000	82,223.61	August	1957
1	Manistique	City of Manistique	3	7	1	780,000	227,640.00	January	1958
2	Marlette	City of Marlette	1	7	1	292,000	87,600.00	September	1957
2	Mount Pleasant	City of Mount Pleasant	4	7	1	462,260	134,178.21	November	1957
1	Muskegon	City of Muskegon	5	1	2	1,142,320	250,000.00	March	1958
2	Ontonagon	Village of Ontonagon	1	7	1	262,106	78,631.91	June	1957
2	Portland	Village of Portland	2	7	1	336,644	100,993.44	do	1957
3	Roscommon	Town of Roscommon	1	1	1	134,366	38,505.00	March	1957

1	Saugatuck	Village of Saugatuck	1	1	1	119,750	32,217.00	February	1958
2	St. Clair	City of St. Clair	2	5	1	523,865	157,159.50	March	1957
2	Stambaugh	City of Stambaugh	1	1	1	193,493	58,047.90	November	1957
1	Traverse City	City of Traverse City	4	1	2	510,820	153,246.00	do	1957
	State total					9,273,365	2,543,965.33		

MINNESOTA, STATE ALLOTMENT $1,852,700

1	Adams	Village of Adams	1	7	1	$130,000	$39,000.00	December	1957
1	Blooming Prairie	Village of Blooming Prairie	1	1	1	231,000	69,300.00	do	1957
2	Bovey and Coleraine	Bovey and Coleraine	2	7	1	304,770	91,431.00	February	1957
1	Cambridge	Village of Cambridge	2	5	1	397,507	119,252.22	April	1957
1	Canton	Village of Canton	1	7	1	79,200	23,760.00	December	1957
2	Clinton	Town of Clinton	1	9	1	127,000	26,550.00	March	1957
1	Crookston	City of Crookston	3	9	1	457,833	137,350.00	December	1957
1	East Grand Forks	City of East Grand Forks	3	9	1	994,000	250,000.00	do	1957
1	Farmington	Village of Farmington	1	7	1	363,997	109,199.25	do	1957
1	Little Falls	City of Little Falls	3	7	1	675,430	202,629.00	do	1957
1	Mazeppa	Village of Mazeppa	1	6	1	75,458	20,997.90	do	1957
2	Mora	City of Mora	1	1	7	265,894	79,768.20	April	1957
2	Northfield	City of Northfield	3	5	1	822,500	246,750.00	March	1957
2	Park Rapids	City of Park Rapids	2	6	1	222,579	62,446.02	do	1957
1	Pine Island	Village of Pine Island	1	7	1	341,303	102,390.90	December	1957
1	Plummer	Village of Plummer	1	9	1	60,564	18,169.20	do	1957
1	Stewart	Village of Stewart	1	7	1	152,000	21,538.66	do	1957
1	Tower	City of Tower	1	7	1	145,000	43,500.00	do	1957
2	Two Harbors	City of Two Harbors	2	6	4	442,490	95,456.09	March	1957
2	Waterville	City of Waterville	1	5	1	360,676	93,211.56	do	1957
	State total					6,649,201	1,852,700.00		

MISSISSIPPI, STATE ALLOTMENT, $2,352,925

1	Ackerman	Town of Ackerman	1	5	1	$124,731	$37,419.30	June	1957
2	Ellisville	Mississippi State Building Commission	2	9	1	45,595	13,678.57	do	1957
2	Fayette	Town of Fayette	1	9	1	129,448	38,834.42	do	1957
2	Hernando	Town of Hernando	1	9	1	44,450	13,365.00	do	1957
3	Houston	Town of Houston	1	9	1	43,000	12,515.64	December	1956
1	Itta Bena	Mississippi Vocational School	1	9	1	53,729	16,118.85	June	1957
1	Meridian	City of Meridian	4	7	1	1,992,100	250,000.00	December	1956
1	Newton	City of Newton	2	9	1	180,000	54,000.00	January	1958
1	Starkville	City of Starkville	3	1	1	282,000	84,600.00	do	1957
2	University	University of Mississippi	2	5	1	376,884	113,065.00	June	1957
3	Wiggins	Town of Wiggins	1	9	1	41,542	12,463.10	December	1956
	State total					3,313,479	646,059.88		

Complete listing—All projects approved under sec. 6 of the Federal Water Pollution Control Act—Continued

MISSOURI, STATE ALLOTMENT, $2,120,725

Status	Location	Name of applicant	Population code	Description	Type construction	Estimated eligible project cost	Federal grant offer	Project approved	
								Month	Year
1	Aurora	City of Aurora	2	6	1	$572,165	$171,649.50	August	1957
3	Belle	Town of Belle	1	9	1	47,000	11,985.30	December	1956
1	Benton	City of Benton	1	9	1	35,000	9,825.00	May	1957
3	Blue Springs	City of Blue Springs	1	9	1	150,776	22,105.28	January	1957
2	Bowling Green	City of Bowling Green	1	9	1	137,096	39,048.00	July	1957
2	Buckner	Town of Buckner	1	9	1	42,253	11,860.64	October	1957
2	Cabool	City of Cabool	1	1	2	44,557	12,151.00	do	1957
2	Campbell	City of Campbell	1	5	1	52,756	10,018.75	August	1957
2	Carthage	City of Carthage	4	1	1	216,000	59,670.00	January	1957
2	Center	Village of Center	1	9	1	20,000	4,754.52	February	1957
1	Chillicothe	City of Chillicothe	3	1	1	442,112	110,568.78	December	1957
1	Desloge	City of Desloge	1	6	1	125,322	37,596.60	November	1957
2	Fornfelt	Town of Fornfelt	1	9	1	53,813	14,763.75	December	1956
1	Grandview	City of Grandview	1	9	1	496,227	141,416.00	do	1957
2	Higginsville	City of Higginsville	2	5	1	521,550	124,841.66	do	1956
1	Holden	City of Holden	1	1	1	237,000	36,510.00	July	1957
2	Hornersville	City of Hornersville	1	9	1	37,751	10,015.23	January	1957
2	Humansville	City of Humansville	1	9	1	169,000	4,770.00	March	1957
2	Ironton	Ironton	1	9	1	54,000	14,702.00	January	1957
1	Joplin	City of Joplin	5	1	3	762,493	228,747.90	July	1957
2	Kahoka	City of Kahoka	1	9	1	45,000	9,614.10	January	1957
2	La Monte	City of La Monte	1	9	1	22,598	6,224.75	August	1957
2	Lincoln	Village of Lincoln	1	9	1	27,420	7,566.00	February	1957
1	Marceline	City of Marceline	2	7	1	284,212	85,263.60	March	1957
1	Marshall	City of Marshall	3	1	4	349,000	104,700.00	do	1957
2	Martinsburg	City of Martinsburg	1	9	1	7,835	2,350.65	August	1957
1	Pleasant Hill	City of Pleasant Hill	1	9	1	119,672	35,901.75	do	1957
2	Springfield NW	City of Springfield	6	1	7	635,000	177,000.00	February	1957
2	Springfield SW	do	6	1	1	4,250,000	250,000.00	July	1957
2	Stanberry	City of Stanberry	1	1	1	136,564	39,786.95	February	1957
1	Steelville	City of Steelville	1	5	1	99,950	29,985.00	do	1957
3	Stover	Town of Stover	1	9	1	30,216	7,714.80	December	1956
2	Thayer	City of Thayer	1	9	1	160,000	45,972.06	April	1957
2	Tipton	City of Tipton	1	9	1	59,000	14,972.40	March	1957
2	Trenton	Trenton	3	5	1	523,860	139,096.66	January	1957
2	Troy	City of Troy	1	6	1	215,000	54,102.61	do	1957
3	Union	City of Union	2	4	1	148,286	4,693.06	March	1957
1	Vandalia	City of Vandalia	2	9	1	43,500	12,600.00	July	1957
3	Wellsville	City of Wellsville	1	9	1	73,750	8,663.00	do	1957
	State total					11,447,734	2,113,207.30		

MONTANA, STATE ALLOTMENT, $1,006,975

1	Big Timber	City of Big Timber	1	9	1	$51,901	$15,570.45	January	1958
2	Billings	City of Billings	5	3	1	427,512	119,921.00	March	1957
1	Butte	Metropolitan Sanitary and Sewer District	6	3	1	1,118,877	250,000.00	November	1957
2	Culbertson	Town of Culbertson	1	9	1	59,930	17,979.00	May	1957
1	Cut Bank	City of Cut Bank	2	9	1	254,860	75,168.00	August	1957
1	Dodson	Town of Dodson	1	9	1	25,440	7,632.00	do	1957
3	Geraldine	Town of Geraldine	1	9	1	12,998	3,763.99	March	1957
1	Malta	City of Malta	1	9	1	133,556	40,066.80	September	1957
2	Plevna	Town of Plevna	1	9	1	21,350	6,405.00	July	1957
3	Richey	Town of Richey	1	9	1	38,000	10,380.00	March	1957
1	Twin Bridges	Montana State Orphans Home	1	9	1	28,571	8,571.00	September	1957
1	White Sulphur Springs	Town of White Sulphur Springs	1	9	1	115,000	28,252.50	do	1957
	State total					2,287,995	583,709.74		

NEBRASKA, STATE ALLOTMENT, $1,335,225

2	Beatrice	City of Beatrice	4	5	1	$638,600	$181,533.00	July	1957
1	Blair	City of Blair	2	1	1	147,900	44,370.00	December	1957
1	Clay Center	Village of Clay Center	1	9	1	10,000	3,000.00	do	1957
1	Cortland	Village of Cortland	1	9	1	24,100	7,230.00	do	1957
2	Cozad	City of Cozad	2	1	1	113,137	35,441.13	July	1957
3	Elmwood	Village of Elmwood	1	6	1	21,958	4,608.00	January	1958
1	Fairbury	City of Fairbury	3	6	1	309,356	84,967.80	September	1957
2	Hastings	City of Hastings	4	1	4	497,657	142,667.25	July	1957
2	Hildreth	Village of Hildreth	1	9	1	49,384	3,939.15	December	1957
1	Holdrege	City of Holdrege	2	1	3	190,500	57,150.00	September	1957
1	Indianola	City of Indianola	1	1	3	22,000	6,600,00	do	1957
1	Juniata	Village of Juniata	1	9	1	81,247	7,997.02	October	1957
1	Kimball	City of Kimball	2	9	1	95,400	28,620.00	December	1957
1	Lexington	City of Lexington	3	1	1	382,000	114,600.00	September	1957
1	Milford	Milford	1	5	1	79,420	23,826.00	June	1957
1	Norfolk	City of Norfolk	4	7	1	380,000	114,000.00	July	1957
2	Ogallala	City of Ogallala	2	7	1	285,000	85,500.00	September	1957
1	Omaha	City of Omaha	8	1	2	1,850,000	250,000.00	October	1957
1	Osceola	City of Osceola	1	9	1	35,030	10,509.06	September	1957
1	Shelton	Village of Shelton	1	1	3	44,789	13,437.00	do	1957
1	Superior	Superior	2	5	1	233,765	70,129.50	June	1957
1	Sutherland	Village of Sutherland	1	7	1	60,000	16,500.00	December	1957
1	Unadilla	Village of Unadilla	1	9	1	13,467	4,040.19	September	1957
3	Utica	Village of Utica	1	9	1	18,781	4,421.68	December	1957
	State total					5,583,491	1,315,086.78		

Complete listing—All projects approved under sec. 6 of the Federal Water Pollution Control Act—Continued

NEVADA, STATE ALLOTMENT, $655,975

Status	Location	Name of applicant	Population code	Description	Type construction	Estimated eligible project cost	Federal grant offer	Project approved	
								Month	Year
1	Henderson	City of Henderson	2	1	1	$361,000	$108,300.00	May	1957
1	Las Vegas	City of Las Vegas	4	1	4	130,000	39,000.00	do	1957
	State total					491,000	147,300.00		

NEW HAMPSHIRE, STATE TOTAL, $1,072,975

1	Derry	Town of Derry	3	9	1	$549,333	$164,800.00	June	1957
2	Dover	City of Dover	1	1	1	108,500	32,550.00	September	1957
1	do	do	4	7	1	1,000,000	250,000.00	March	1958
2	Goffstown	Town of Goffstown	3	7	1	245,000	73,500.00	February	1957
1	Jaffrey	Town of Jaffrey	1	9	1	276,600	82,980.00	April	1957
1	Rockingham County	County Commissioners	1	7	1	65,000	19,500.00	November	1957
1	Unity	Sullivan County Commission	1	1	2	8,216	2,464.80	June	1957
	State total					2,252,649	625,794.80		

NEW JERSEY, STATE ALLOTMENT, $2,223,725

2	Avalon	Avalon Sewerage Authority	1	1	1	$487,668	$135,000.00	July	1957
2	Bergen County	Board of chosen freeholders	1	1	7	89,777	26,933.01	September	1957
2	Burlington	City of Burlington	4	1	6	619,102	185,730.55	March	1957
2	Caldwell	Borough of Caldwell	3	1	3	460,000	138,000.00	do	1957
2	Florence	Township of Florence	3	1	3	373,568	112,070.05	August	1957
2	Millville	City of Millville	4	1	6	568,824	163,200.00	March	1957
1	North Wildwood	City of North Wildwood	2	1	3	264,150	79,245.00	June	1957
1	North Bergen	Township of North Bergen	5	5	1	855,000	250,000.00	December	1957
2	Plainfield	City of Plainfield	5	3	1	1,500,000	250,000.00	March	1957
2	Ridgewood	Village of Ridgewood	4	1	4	1,600,000	250,000.00	July	1957
2	Ship Bottom	Ship Bottom Sewerage Authority	1	6	1	350,000	104,519.32	March	1957
1	Somerville	Somerset Raritan Valley Sewerage Authority	4	7	1	2,525,000	250,000.00	November	1957
1	Trenton	City of Trenton	7	1	2	6,207,719	250,000.00	July	1957
	State total					15,900,808	2,194,697.93		

NEW MEXICO, STATE ALLOTMENT, $1,259,700

1	Alamogordo	City of Alamogordo	3	1	2	$312,500	$90,000.00	December	1957
2	Albuquerque	City of Albuquerque	6	1	2	904,512	250,000.00	February	1957
1	Do	do	6	4	5	101,364	6,000.00	December	1957
2	Aztec	Town of Aztec	1	5	1	211,430	63,429.00	March	1957
1	Bayard	Village of Bayard	1	6	1	115,932	33,000.00	December	1957
1	Carlsbad	City of Carlsbad	4	1	4	516,657	154,997.00	do	1957
3	Carrizozo	Town of Carrizozo	1	6	1	65,516	15,844.13	April	1957
1	Cloudcraft	Village of Cloudcraft	1	6	1	95,000	25,000.00	March	1958
1	Espanola	Village of Espanola	1	3	1	35,161	10,548.30	July	1957
1	Farmington	Town of Farmington	2	3	1	113,291	33,987.58	May	1957
3	Fort Sumner	Village of Fort Sumner	1	1	1	115,371	26,022.00	February	1957
2	Gallup	Town of Gallup	3	5	4	199,998	60,157.69	April	1957
1	Grants	Town of Grants	1	6	1	233,000	69,900.00	March	1957
1	Las Cruces	City of Las Cruces	4	7	1	189,240	56,772.00	April	1957
1	Lovington	City of Lovington	2	5	1	382,000	110,000.00	December	1957
1	Milan	Village of Milan	1	3	1	162,467	48,000.00	February	1958
2	Roswell	City of Roswell	5	3	1	76,290	22,887.15	May	1957
1	Ruidoso	Village of Ruidoso	1	5	1	346,548	103,964.40	December	1957
2	Santa Fe	City of Santa Fe	5	2	1	15,047	4,514.15	February	1957
1	Silver City	Town of Silver City	3	7	1	249,174	72,000.00	December	1957
	State total					4,440,498	1,257,023.40		

NEW YORK, STATE ALLOTMENT, $5,496,225

1	Alfred	Village of Alfred	1	7	4	$173,981	$52,194.34	September	1957
2	Altamont	Village of Altamont	1	1	4	165,500	49,650.00	March	1957
2	Bethlehem	Delmar Elsmere	4	1	2	260,644	71,593.20	February	1957
1	Binghamton	City of Binghamton	6	1	1	2,090,900	250,000.00	March	1957
1	Clyde	Village of Clyde	1	5	1	538,220	161,466.00	October	1957
2	Coney Island	New York Department of Public Works	9	1	2	9,520,000	250,000.00	August	1957
2	East Greenbush	East Greenbush General Sewage Disposal	3	1	2	52,144	15,643.20	May	1957
1	Freeport	Village of Freeport	4	1	2	900,000	250,000.00	December	1957
1	Geneseo	Village or Geneseo	2	6	1	342,000	102,600.00	May	1957
2	Geneva	City of Geneva	4	3	1	76,300	22,890.00	October	1957
1	Gowanda	City of Gowanda	2	7	1	331,146	99,343.95	September	1957
1	Greenport	Town of Greenport Sanitary District No. 1	1	5	1	204,900	55,232.40	do	1957
1	Irvington	Village of Irvington	2	3	1	35,430	10,600.00	March	1957
1	Ithica	City of Ithica	5	7	4	757,000	227,100.00	do	1958
2	Jamestown	City of Jamestown	5	8	1	436,800	105,660.00	do	1958
1	Lewiston	Village of Lewiston	1	1	1	212,500	63,750.00	July	1957
1	Malone	Village of Malone	3	1	2	303,100	90,930.00	February	1958
1	Massena	Village of Massena	4	7	1	1,349,000	250,000.00	June	1957
2	Mayville	Village of Mayville	1	7	1	278,000	83,400.00	do	1957
1	New Paltz	Village of Nee Paltz	1	7	1	234,840	70,452.00	do	1957
2	Newark	Village of Newark	4	1	2	550,000	2,520.00	December	1957
2	Onondaga	Onondaga public works	8	1	1	2,556,000	250,000.00	March	1957
1	Owego	Village of Owego	3	7	1	1,008,691	250,000.00	do	1958

Complete listing—All projects approved under sec. 6 of the Federal Water Pollution Control Act—Continued

NEW YORK STATE ALLOTMENT, $5,496,225—Continued

Status	Location	Name of applicant	Population code	Description	Type construction	Estimated eligible project cost	Federal grant offer	Project approved	
								Month	Year
1	Pawling	Village of Pawling	1	6	4	$101,359	$30,407.70	May	1957
1	Phelps	Village of Phelps	1	1	1	382,000	114,600.00	March	1958
1	Pittsford	Town of Pittsford	1	7	1	270,000	75,000.00	February	1958
1	Poughkeepsie	Arlington Sewer District	5	5	1	762,716	228,814.80	March	1957
1	do	City of Poughkeepsie	5	1	1	1,425,000	250,000.00	do	1957
1	Richmondville	Village of Richmondville	1	7	1	92,000	27,600.00	May	1957
2	Rochester	City of Rochester	8	4	1	595,680	178,704.00	March	1957
1	do	do	8	1	7	2,907,964	250,000.00	August	1957
1	Rouses Point	Village of Rouses Point	1	5	1	426,860	128,058.00	April	1957
1	Southampton	Town of Southampton	2	1	1	24,500	7,350.00	June	1957
2	Suffern	Village of Suffern	2	1	6	650,000	195,000.00	March	1957
1	Wappingers Falls	Village of Wappingers Falls	2	1	1	189,000	56,700.00	December	1957
1	Webster	Village of Webster	1	1	2	178,500	53,550.00	May	1957
	State total					39,382,675	4,380,809.59		

NORTH CAROLINA, STATE ALLOTMENT, $2,543,100

2	Ayden	Town of Ayden	1	5	1	$292,948	$87,884.00	March	1957
1	Denton	Town of Denton	1	1	2	86,000	25,800.00	October	1957
1	Elkin	Town of Elkin	2	7	1	398,000	119,400.00	September	1957
2	Farmville	Town of Farmville	1	6	1	425,000	105,260.00	December	1956
2	Fayetteville	City of Fayetteville	5	1	1	2,250,000	250,000.00	February	1957
2	Gastonia	City of Gastonia	4	1	1	1,766,544	250,000.00	November	1957
2	Gibsonville	City of Gibsonville	1	1	2	121,800	36,540.00	February	1957
2	Greensboro	City of Greensboro	6	1	7	1,293,124	184,104.00	May	1957
1	Hickory	City of Hickory	4	1	1	301,095	88,470.00	January	1958
1	Jonesville	Town of Jonesville	1	7	1	122,000	36,600.00	September	1957
1	Littleton	Town of Littleton	1	6	1	167,273	50,182.00	February	1957
2	Louisburg	Town of Louisburg	2	5	1	255,048	76,514.00	do	1957
2	Moeksville	City of Moeksville	1	6	1	156,000	46,800.00	March	1957
2	Mount Olive	City of Mount Olive	2	1	1	172,000	48,829.00	February	1957
2	North Wilkesboro	Town of North Wilkesboro	1	7	1	399,272	112,710.00	January	1957
1	Norwood	Town of Norwood	1	6	1	146,992	44,097.00	November	1957
1	Parkton	Town of Parkton	1	1	1	75,000	22,500.00	October	1957
1	Pilot Mountain	Town of Pilot Mountain	1	1	3	77,350	23,205.00	September	1957
1	Red Springs	Town of Red Springs	1	7	1	156,162	46,848.00	December	1957
2	Rocky Mount	City of Rocky Mount	5	1	7	571,000	163,050.00	February	1957
1	Spencer	Town of Spencer	2	7	1	374,715	112,414.00	December	1957
1	Spring Hope	Town of Spring Hope	1	7	1	100,494	30,148.00	do	1957

1	Statesville	City of Statesville	4	1	2	758,900	227,670.00	October	1957
2	Wadesboro	Wadesboro	2	6	1	291,717	87,515.00	February	1957
1	Wilson	City of Wilson	4	1	1	900,000	250,000.00	September	1957
	State total					11,658,434	2,526,540.00		

NORTH DAKOTA, STATE ALLOTMENT, $1,378,825

1	Berthold	City of Berthold	1	9	1	$31,590	$9,477.00	February	1958
1	Bowbells	City of Bowbells	1	9	1	61,062	18,318.75	do	1958
1	Crystal	City of Crystal	1	9	1	48,769	14,631.00	January	1958
3	Devils Lake	City of Devils Lake	2	3	1	26,500	7,950.00	July	1957
1	do	do	3	9	1	31,000	9,300.00	January	1958
3	Dickinson	City of Dickinson	3	9	1	274,500	62,043.97	February	1957
3	Dodge	Village of Dodge	1	9	1	9,300	2,400.00	April	1957
1	Edmore	City of Edmore	1	9	1	31,248	9,374.40	December	1957
1	Emerado	Village of Emerado	1	9	1	31,865	9,559.50	March	1958
2	Glenburn	Town of Glenburn	1	9	1	14,478	4,101.48	January	1957
1	Grafton	City of Grafton	2	9	3	470,000	141,000.00	March	1957
3	Granville	Granville	1	9	1	9,698	3,651.30	January	1957
2	Hannaford	Village of Hannaford	1	9	1	68,000	19,800.00	March	1957
1	Hazen	City of Hazen	1	9	1	35,190	10,407.00	February	1958
2	Hettinger	City of Hettinger	1	9	1	51,675	13,148.57	April	1957
1	Hillsboro	City of Hillsboro	1	9	1	111,856	33,556.88	January	1958
1	Hoople	Village of Hoople	1	9	1	45,070	13,521.00	November	1957
1	Jamestown	North Dakota State Hospital	1	9	1	204,000	61,200.00	February	1958
2	do	Jamestown	4	9	7	100,000	33,597.20	do	1957
3	Killdeer	City of Killdeer	1	9	1	12,800	3,840.00	January	1957
3	Lansford	Town of Lansford	1	9	1	29,875	8,513.40	March	1957
1	Leeds	City of Leeds	1	9	1	26,835	8,050.50	December	1957
1	Lignite	Village of Lignite	1	9	1	27,346	8,203.80	do	1957
2	Makoti	Village of Makoti	1	9	1	15,000	4,500.00	March	1957
1	McClusky	City of McClusky	1	9	1	33,235	9,970.50	do	1958
1	Milton	Village of Milton	1	9	1	44,110	13,233.00	January	1958
2	Mohall	City of Mohall	1	9	1	34,000	9,300.00	August	1957
3	Mott	City of Mott	1	9	1	43,000	12,900.00	February	1957
1	Munich	Village of Munich	1	9	1	31,596	9,478.80	December	1957
1	Neche	City of Neche	1	2	1	17,500	5,250.00	March	1958
1	Osnabrock	Village of Osnabrock	1	9	1	29,375	8,812.50	December	1957
2	Parshall	City of Parshall	1	9	1	35,302	10,590.60	June	1957
2	Pembina	City of Pembina	1	9	1	113,000	26,872.50	January	1957
2	Petersburg	Village of Petersburg	1	9	1	33,984	10,195.20	April	1957
3	Reeder	Village of Reeder	1	9	1	19,800	3,273.35	February	1957
2	Ryder	Village of Ryder	1	9	1	21,000	5,400.00	April	1957
2	Southwest Fargo	City of Southwest Fargo	1	9	1	214,768	83,372.91	July	1957
1	Sherwood	City of Sherwood	1	9	1	65,518	16,793.98	February	1957
2	Starkweather	Village of Starkweather	1	9	1	37,812	8,103.90	July	1957
1	Taylor	Village of Taylor	1	9	1	23,353	7,006.02	August	1957
1	Westhope	City of Westhope	1	9	1	15,000	4,500.00	September	1957
2	Willow City	City of Willow City	1	9	1	32,016	9,604.80	April	1957
1	Wing	City of Wing	1	9	1	21,938	6,581.40	February	1958
	State total					2,633,964	771,385.21		

Complete listing—All projects approved under sec. 6 of the Federal Water Pollution Control Act—Continued

OHIO, STATE ALLOTMENT, $3,308,425

Status	Location	Name of applicant	Population code	Description	Type construction	Estimated eligible project cost	Federal grant offer	Project approved	
								Month	Year
2	Amherst	Village of Amherst	2	7	2	$427,842	$128,352.60	April	1957
1	Brewster	Village of Brewster	1	7	1	343,420	78,174.00	November	1957
2	Campbell	Village of Campbell	4	7	1	636,918	33,400.00	July	1957
1	Canal Fulton	City of Canal Fulton	1	7	1	145,316	43,594.80	December	1957
2	Continental	Village of Continental	1	7	1	264,987	79,495.91	May	1957
2	Delta	Town of Delta	1	7	1	274,749	82,424.55	March	1957
2	East Liverpool	City of East Liverpool	4	3	1	809,107	242,732.00	February	1957
1	Flushing	Village of Flushing	1	7	1	154,874	46,462.20	November	1957
2	Gahanna	Town of Gahanna	1	1	1	150,949	45,284.85	March	1957
2	Leipsic	Village of Leipsic	1	1	1	226,000	65,550.00	February	1957
1	Lowellville	Village of Lowellville	1	7	1	263,043	103,213.03	November	1957
2	Mansfield	City of Mansfield	5	1	1	4,024,746	250,000.00	September	1957
3	Maumee	City of Maumee	3	3	1	507,000	144,401.23	March	1957
1	Millersburg	Village of Millersburg	1	7	1	341,144	102,343.34	November	1957
2	Montpelier	Village of Montpelier	2	7	1	397,000	119,100.00	April	1957
1	Northfield	Village of Northfield	1	1	1	450,000	35,100.00	March	1958
2	Oak Harbor	Village of Oak Harbor	1	7	1	479,380	143,814.00	August	1957
2	Painesville	City of Painesville	4	3	1	832,752	249,825.60	March	1957
2	Perrysburg	Village of Perrysburg	2	7	1	721,200	213,060.00	August	1957
3	Reynoldsburg	Village of Reynoldsburg	1	1	2	199,598	56,632.88	April	1957
1	Rockford	Village of Rockford	1	7	1	153,460	46,038.00	November	1957
2	South Zanesville	South Zanesville	1	1	1	137,400	41,220.00	March	1957
2	Sandusky	City of Sandusky	5	1	1	1,636,123	250,000.00	September	1957
1	Seaman	Village of Seaman	1	1	1	79,969	23,990.70	December	1957
2	Shiloh	Village of Shiloh	1	1	1	127,500	29,640.00	November	1957
3	Swanton	Village of Swanton	1	7	1	460,000	135,400.66	February	1957
2	Tiltonsville	Village of Tiltonsville	1	7	1	266,595	53,850.00	December	1957
2	Vermilion	Vermilion on the Lake	1	1	1	100,000	30,000.00	March	1957
1	Washingtonville	Village of Washingtonville	1	7	1	59,633	17,889.90	February	1958
2	Waterville	Town of Waterville	1	5	4	193,079	57,923.58	March	1957
2	Waynesburg	Village of Waynesburg	1	7	1	166,600	30,600.00	December	1957
2	Wellsville	City of Wellsville	3	7	1	432,774	129,832.20	September	1957
2	Yorkville	Yorkville	1	5	1	332,100	96,630.00	March	1957
	State total					15,795,258	3,205,976.03		

OKLAHOMA, STATE ALLOTMENT, $1,724,550

2	Ardmore	City of Ardmore	4	5	1	$572,874	$150,000.00	March	1957
2	do	do	4	7	4	499,653	149,895.99	October	1957
3	Cache	Town of Cache	1	9	1	28,963	8,688.95	March	1957
3	Carnegie	Town of Carnegie	1	1	1	57,428	10,736.70	do	1957
2	Chickasha	City of Chickasha	4	1	2	110,063	29,619.66	May	1957
1	Chouteau	City of Chouteau	1	5	1	174,801	43,500.00	February	1958
2	Cushing	City of Cushing	3	5	4	467,179	140,153.96	October	1957
2	Dill City	Town of Dill City	3	6	1	23,900	7,170.00	do	1957
3	Drumright	City of Drumright	3	5	1	194,944	36,995.00	February	1957
2	Grove	Town of Grove	1	5	1	87,000	26,100.00	March	1957
2	Harrah	Town of Harrah	1	5	1	37,698	11,309.43	October	1957
2	Kingston	City of Kingston	1	9	1	54,773	13,880.27	March	1957
1	Lindsay	City of Lindsay	2	1	2	74,450	22,335.00	October	1957
1	Locust Grove	City of Locust Grove	1	5	1	168,946	47,100.00	February	1958
2	Luther	Town of Luther	1	9	1	41,434	12,180.15	March	1957
1	Mangum	City of Mangum	2	6	1	166,225	49,867.78	October	1957
3	Marietta	City of Marietta	1	1	1	147,212	23,391.42	February	1957
2	Muskogee	City of Muskogee	5	2	1	721,599	150,000.00	March	1957
2	do	do	5	1	1	680,000	180,000.00	December	1957
2	Norman	City of Norman	5	5	4	287,188	87,836.36	March	1957
2	Oklahoma City	City of Oklahoma City	7	1	3	514,085	152,725.50	do	1957
2	Pawnee	City of Pawnee	2	1	2	26,670	9,198.90	do	1957
2	Tulsa	City of Tulsa	7	1	1	1,800,000	150,000.00	do	1957
2	do	do	7	3	1	780,204	191,100.00	October	1957
	State total					7,717,289	1,703,785.07		

OREGON, STATE ALLOTMENT, $1,298,700

2	Albany	City of Albany	4	1	3	$60,200	$6,030.00	February	1957
2	Burns	City of Burns	2	9	3	75,566	22,669.68	August	1957
2	Clatskanie	City of Clatskanie	1	5	1	171,230	51,369.00	February	1957
2	Drain	City of Drain	1	6	1	65,938	19,781.40	August	1957
1	Fairview	Multnomah County	1	2	1	110,000	33,000.00	March	1957
1	Government Camp	Government Camp Sewer District	1	6	1	64,013	19,204.00	April	1957
1	Hillsboro	City of Hillsboro	3	7	1	389,000	116,700.00	January	1958
2	Klamath Falls	City of Klamath Falls	4	7	1	941,437	146,119.12	June	1957
2	Lebanon	City of Lebanon	3	1	2	44,334	13,300.09	February	1957
3	Milton Freewater	City of Milton Freewater	2	2	3	168,703	48,422.25	August	1957
3	North Bend	City of North Bend	3	4	7	19,605	5,881.50	April	1957
1	Pilot Rock	Town of Pilot Rock	1	5	1	158,740	47,622.00	February	1958
3	Prairie City	City of Prairie City	1	5	1	82,659	24,797.41	do	1957
1	Rainier	City of Rainier	1	7	1	109,896	32,968.80	January	1958
2	Roseburg	City of Roseburg	3	5	1	955,915	250,000.00	March	1957
1	St. Helens	City of St. Helens	2	5	1	390,505	117,151.50	November	1957
1	Sunset Valley	Sunset Valley Sanitary District	2	6	3	215,900	63,724.50	September	1957
3	Tigard	Tigard Sanitary District	1	1	1	87,197	26,159.19	February	1957
2	Tillamook	City of Tillamook	2	7	6	182,581	54,774.37	March	1957
3	Weston	City of Weston	1	5	1	91,099	26,581.07	August	1957
	State total					4,384,518	1,126,255.88		

Complete listing—All projects approved under sec. 6 of the Federal Water Pollution Control Act—Continued

PENNSYLVANIA, STATE ALLOTMENT, $4,196,375

Status	Location	Name of applicant	Population code	Description	Type construction	Estimated eligible project cost	Federal grant offer	Project approved	
								Month	Year
2	Berwick	Municipal Authority of Berwick	4	7	1	$1,207,000	$259,000.00	April	1957
2	Bethel	Borough of Bethel	4	1	1	1,681,520	250,000.00	November	1957
2	Carlisle	Carlisle Borough Sewage Authority	4	6	4	951,798	105,690.00	February	1958
1	Christiana	Borough of Christiana	1	5	1	218,650	65,595.00	do	1958
1	Coraopolis	Coraopolis Municipal Sanitary Authority	4	7	1	1,590,000	250,000.00	March	1958
2	Doylestown	Doylestown Borough Authority	3	7	1	200,344	60,103.43	December	1957
2	Elizabeth	Elizabeth Borough Municipal Authority	2	7	1	551,591	165,477.30	June	1957
2	Galeton	Galeton Borough Authority	1	7	1	256,690	63,149.55	do	1957
2	Greenville	Greenville Sanitary Authority	4	1	1	1,265,000	250,000.00	September	1957
1	Hanover Township	Township of Hanover	4	1	1	1,600,000	250,000.00	February	1958
1	Harrisburg	Harrisburg Sewerage Authority	6	7	1	2,804,260	250,000.00	June	1957
1	Hopewell	Hopewell Township Authority	3	7	1	770,000	205,200.00	November	1957
2	Lansdale	Borough Council of Lansdale	3	1	2	506,611	15,825.00	March	1958
1	Mohnton	Mohnton Borough Authority	1	3	1	73,600	20,700.00	February	1958
3	North East	North East Borough Authority	2	1	2	273,728	69,822.29	June	1957
2	Oil City	Oil City General Authority	4		1	1,241,000	250,000.00	May	1957
2	Osborne	Borough of Osborne	1	3	1	120,312	33,465.99	October	1957
1	Perkasie	Perkasie Borough Authority	2	1	7	565,665	159,351.30	February	1958
2	Philadelphia	City of Philadelphia	9	3	1	1,039,426	250,000.00	June	1957
2	Pittsburgh	Allegheny County Sanitary Authority	9	7	1	354,485	106,345.50	do	1957
2	Radnor	Radnor Township Municipal Authority	4	3	1	140,200	42,060.00	October	1957
2	State College	State College Sanitary Authority	4	3	1	600,000	3,300.00	March	1958
2	Township of Penn	Township of Penn	5	7	1	994,750	250,000.00	June	1957
2	Warren	Warren Borough Sanitary Authority	4	7	1	1,493,390	250,000.00	do	1957
1	White Haven	White Haven Municipal Authority	1	7	1	197,250	59,175.00	do	1957
	State total					20,697,180	3,675,260.27		

RHODE ISLAND, STATE ALLOTMENT, $1,030,100

2	Cranston	Department of Public Works	6	1	3	$19,500	$5,100.00	July	1957
2	East Providence	Blackstone Valley Sanitary District	7	1	2	386,600	115,980.00	June	1957
1	Exeter	State of Rhode Island	1	1	1	264,000	79,000.00	May	1957
2	Newport	City of Newport	5	3	3	159,000	47,700.00	November	1957
2	Providence	City of Providence	7	1	3	652,080	182,397.50	January	1957
1	Westerly	Board of Water Commissioners	3	6	1	500,000	150,000.00	do	1958
	State total					1,981,180	581,177.50		

SOUTH CAROLINA, STATE ALLOTMENT $2,002,625

2	Bennettsville	City of Bennettsville	3	1	1	$212,489	$63,746.70	February	1957
3	Dillon	City of Dillon	3	7	5	126,407	37,922.33	January	1957
2	Due West	Town of Due West	1	7	1	118,627	22,440.00	April	1957
1	Easley	City of Easley	3	6	4	475,000	142,500.00	March	1958
1	Greenville County	County Marketing Community	4	2	1	20,800	6,240.00	December	1957
1	Inman	Town of Inman	1	5	1	168,000	47,969.00	October	1957
3	Johnston	Town of Johnston	1	1	1	58,016	16,332.70	March	1957
1	Lake City	City of Lake City	3	7	1	487,000	146,100.00	February	1957
1	Laurens	City of Laurens	3	6	1	780,000	219,750.00	June	1957
2	Manning	Town of Manning	2	7	1	168,370	50,511.00	October	1957
1	Marion	City of Marion	3	1	1	261,912	78,573.75	January	1958
2	North	Town of North	1	1	4	50,000	15,000.00	June	1957
1	Rock Hill	City of Rock Hill	4	9	1	819,400	245,820.00	do	1957
1	Spartanburg	City of Spartanburg	5	8	1	485,000	145,500.00	September	1957
1	Summerton	Town of Summerton	1	1	3	17,700	5,310.00	January	1958
1	Walhalla	Town of Walhalla	2	5	1	250,000	75,000.00	August	1957
1	Whitten Vill	Board of Trustees	2	1	1	82,693	22,552.50	September	1957
1	Winnsboro	Town of Winnsboro	2	6	1	359,000	107,700.00	August	1957
	State total					4,940,414	1,448,967.98		

SOUTH DAKOTA, STATE ALLOTMENT, $1,324,825

3	Bowdle	Town of Bowdle	1	9	1	$26,843	$7,494.90	March	1957
2	Brookings	City of Brookings	3	7	1	178,200	44,345.62	do	1957
1	Chancellor	Town of Chancellor	1	9	1	21,272	6,381.89	September	1957
2	Colton	Town of Colton	1	9	1	42,165	11,700.50	March	1957
3	Eagle Butte	Eagle Butte	1	9	1	10,021	2,097.90	May	1957
2	Edgemont	Town of Edgemont	1	9	1	83,565	23,274.12	March	1957
1	Elk Point	City of Elk Point	1	9	1	92,855	27,856.00	January	1958
1	Garretson	City of Garretson	1	9	1	33,920	10,176.05	July	1957
1	Groton	City of Groton	1	9	1	53,714	15,864.90	December	1957
2	Howard	City of Howard	1	9	1	62,000	18,600.00	February	1957
1	Humboldt	City of Humboldt	1	9	1	19,471	5,841.00	March	1958
1	Kennebec	Town of Kennebec	1	9	1	26,831	8,049.30	August	1957
3	Mission	Town of Mission	1	9	1	12,171	3,651.69	do	1957
1	Mitchell	City of Mitchell	4	1	2	415,125	124,535.00	March	1958
2	Mobridge	City of Mobridge	2	6	1	196,911	46,911.40	December	1957
1	Newell	City of Newell	1	9	1	34,256	10,276.80	do	1957
2	Onida	City of Onida	1	9	4	19,268	5,780.40	March	1957
1	Orient	Town of Orient	1	9	1	11,178	3,353.40	October	1957
3	Parkston	City of Parkston	1	9	1	47,587	14,276.11	April	1957
1	Redfield	Redfield Hospital and School	3	1	3	8,571	2,571.00	July	1957
3	Sanator	South Dakota State Sanitary District	1	3	3	5,455	1,704.00	November	1957
2	Selby	Selby	1	9	1	24,417	5,115.90	June	1957
1	Sioux Falls	City of Sioux Falls	6	1	4	1,450,000	250,000.00	do	1957
1	Vermillion	City of Vermillion	3	9	1	125,975	37,792.75	March	1958
2	Wagner	Wagner	1	9	1	30,652	8,558.70	May	1957
1	Whitewood	Town of Whitewood	1	9	1	26,337	5,661.85	August	1957
1	Wilmot	City of Wilmot	1	9	1	18,446	5,333.66	October	1957
	State total					3,077,206	707,204.84		

Complete listing—All projects approved under sec. 6 of the Federal Water Pollution Control Act—Continued

TENNESSEE, STATE ALLOTMENT $2,266,125

Status	Location	Name of applicant	Population code	Description	Type construction	Estimated eligible project cost	Federal grant offer	Project approved	
								Month	Year
1	Bluff City	Corporation of Bluff City	1	5	1	$114,600	$34,380.00	August	1957
1	Chattanooga	City of Chattanooga	7	1	1	1,900,000	250,000.00	September	1957
1	Clinton	Town of Clinton	2	9	3	6,000	1,800.00	do	1957
1	Columbia	City of Columbia	4	1	1	1,261,326	250,000.00	March	1957
2	East Ridge	City of East Ridge	3	6	1	865,500	250,000.00	do	1957
2	Elizabethton	City of Elizabethton	4	7	1	790,000	237,000.00	February	1957
2	Harriman	City of Harriman	3	5	1	994,000	250,000.00	March	1957
1	Huntingdon	Town of Huntingdon	1	1	1	117,158	35,147.49	September	1957
1	Martin	City of Martin	2	5	1	342,377	102,713.17	August	1957
1	Morristown	City of Morristown	4	6	1	612,375	183,712.55	September	1957
1	Murfreesboro	City of Murfreesboro	4	6	3	850,200	250,000.00	do	1957
2	Red Bank White Oak	City of Red Bank White Oak	4	1	1	146,736	44,020.00	February	1957
2	Rogersville	City of Rogersville	2	1	1	133,000	39,900.00	March	1957
1	Springfield	City of Springfield	3	5	1	671,382	195,000.00	October	1957
1	Sweetwater	City of Sweetwater	2	7	1	430,420	129,126.00	do	1957
	State total					9,235,074	2,252,799.21		

TEXAS, STATE ALLOTMENT, $3,432,825

2	Abilene	City of Abilene	5	9	1	$1,853,033	$250,000.00	May	1957
2	Anthony	Town of Anthony	1	6	1	115,030	34,509.00	November	1957
1	Beeville	City of Beeville	3	6	1	280,700	84,210.00	do	1957
2	Cameron	City of Cameron	3	6	1	174,051	52,215.37	March	1957
1	Cleburne	City of Cleburne	4	7	2	116,100	34,830.00	November	1957
1	De Leon	City of De Leon	1	1	1	42,750	12,825.00	do	1957
1	Deer Park	City of Deer Park	1	7	1	250,000	75,000.00	do	1957
1	Dickinson	Galveston County, Water Control Irrigation District.	2	1	2	101,287	30,386.00	December	1957
2	El Paso	Public Service Board	7	1	2	795,500	221,100.00	March	1957
1	Ferris	City of Ferris	1	7	1	143,057	42,917.25	November	1957
2	Fort Worth	City of Fort Worth	8	7	1	1,876,283	250,000.00	do	1957
2	Giddings	City of Giddings	2	6	3	54,100	16,230.00	March	1957
1	Gilmer	City of Gilmer	2	1	1	206,000	61,800.00	November	1957
1	Granbury	City of Granbury	1	5	1	163,472	49,041.60	do	1957
3	Hallettsville	City of Hallettsville	1	1	1	99,000	28,650.00	March	1957
1	Henderson	City of Henderson	3	6	1	492,358	147,707.00	November	1957
2	Hereford	City of Hereford	3	1	2	59,312	17,793.00	do	1957
1	Hurst	City of Hurst	3	6	5	454,642	136,392.60	November	1957
1	Jefferson	City of Jefferson	2	6	4	144,730	28,157.21	March	1957

2	Lewisville	City of Lewisville	1	6	1	202,700	57,390.00	do	1957
2	Liberty	City of Liberty	2	1	1	110,000	30,900.00	do	1957
1	Marshall	City of Marshall	4	1	1	355,000	102,300.00	do	1957
1	Mathis	City of Mathis	2	6	1	105,000	31,500.00	do	1957
1	McAllen	City of McAllen	4	1	2	335,000	100,500.00	November	1957
2	Mercedes	City of Mercedes	4	1	4	120,000	36,000.00	March	1957
1	Mesquite	City of Mesquite	1	6	1	850,000	250,000.00	November	1957
2	New Braunfels	City of New Braunfels	4	6	2	250,000	75,000.00	March	1957
2	Orange	City of Orange	4	5	1	740,210	222,060.00	December	1957
1	Pineland	City of Pineland	1	1	1	113,167	33,950.10	November	1957
1	Port Lavaca	City of Port Lavaca	3	1	5	101,328	30,398.63	do	1957
2	Richmond	City of Richmond	1	1	1	54,879	16,463.77	March	1957
2	San Angelo	City of San Angelo	6	6	1	1,129,940	250,000.00	do	1957
1	San Marcos	City of San Marcos	3	6	4	159,135	47,590.48	do	1957
2	Sweetwater	City of Sweetwater	4	6	1	874,200	250,000.00	do	1957
2	Texas City	City of Texas City	4	2	2	133,651	40,095.30	do	1957
3	Uvalde	City of Uvalde	3	1	2	62,510	16,163.10	do	1957
2	Van Alystyne	City of Van Alystyne	1	6	2	77,048	23,114.52	November	1957
2	Wharton	City of Wharton	2	5	1	300,900	89,820.00	March	1957
1	Wolfe City	City of Wolfe City	1	1	1	44,000	13,200.00	do	1957
1	Yoakum	City of Yoakum	3	7	4	214,300	64,290.00	November	1957
	State total					13,754,373	3,354,499.93		

UTAH, STATE ALLOTMENT, $1,179,700

2	Cottonwood Sewer District	Cottonwood Sewer District	3	6	1	$620,991	$186,297.45	September	1957
2	Davis County	North Davis County District	4	1	1	1,212,847	250,000.00	do	1957
2	Granger Hunter	Granger Hunter Improvement District	3	9	1	774,360	232,308.00	October	1957
1	Kanab	City of Kanab	1	5	1	172,714	51,814.28	February	1958
2	Vernal	Vernal City Corporation	2	5	1	317,038	101,181.41	September	1957
2	Weber County	Central Weber District	6	1	1	3,635,610	250,000.00	do	1957
	State total					6,733,560	1,071,601.14		

VERMONT, STATE ALLOTMENT, $1,131,975

1	Bennington	Town of Bennington	3	7	1	$1,270,000	$250,000.00	February	1958
1	Burlington	City of Burlington	5	7	1	560,000	168,000.00	March	1957
1	South Burlington	Fire District No. 4	1	6	3	107,700	32,310.00	February	1957
	State total					1,937,700	450,310.00		

Complete listing—All projects approved under sec. 6 of the Federal Water Pollution Control Act—Continued

VIRGINIA, STATE ALLOTMENT, $2,052,975

Status	Location	Name of applicant	Population code	Description	Type construction	Estimated eligible project cost	Federal grant offer	Project approved	
								Month	Year
1	Arlington County	Arlington County	7	1	3	$298,246	$77,071.00	September	1957
1	Bedford	City of Bedford	2	3	1	243,600	39,087.00	January	1958
2	Buena Vista	City of Buena Vista	3	1	1	226,349	49,853.00	September	1957
1	Charlottesville	City of Charlottesville	5	7	1	934,210	212,284.00	January	1958
2	Clifton Forge	City of Clifton Forge	3	1	1	293,030	54,221.00	June	1957
1	Cliftondale Park	Alleghany County	1	1	1	26,825	2,706.00	January	1958
2	Colonial Beach	Town of Colonial Beach	1	1	1	300,477	58,280.00	June	1957
2	Crewe	Town of Crewe	1	1	1	182,779	16,710.00	do	1957
2	Danville	City of Danville	5	7	1	1,121,475	183,298.00	December	1957
1	Dogue Creek	Fairfax County	3	1	2	379,200	38,248.00	do	1957
2	Drakes Branch	Town of Drakes Branch	1	6	1	19,190	5,531.00	September	1957
2	Dumfries Sanitary District	Prince William County	1	1	1	114,199	20,471.00	February	1958
2	Elkton	Elkton Water, Street, and Sewer Commission	1	1	1	60,028	6,109.00	June	1957
2	Ettrick	Ettrick Sanitary District	1	3	1	27,014	8,104.00	February	1958
2	Fairfax	Town of Fairfax	1	1	3	897,819	77,071.00	September	1957
1	Fairview Heights	Alleghany County Board of Supervisors	1	7	1	35,096	4,402.00	March	1958
1	Farmville	Town of Farmville	2	9	1	71,090	19,569.00	February	1958
2	Front Royal	Town of Front Royal	3	3	1	115,173	11,892.00	December	1957
1	Galax	City of Galax	3	7	1	435,600	58,247.00	January	1958
2	Glasgow	Town of Glasgow	1	5	1	64,174	19,252.00	June	1957
2	Herndon	Town of Herndon	1	1	3	137,851	11,654.00	September	1957
2	Holmes Run	County of Fairfax	6	3	4	395,531	65,347.00	January	1958
1	Hopewell	City of Hopewell	4	1	1	570,838	77,071.00	February	1958
2	Lower Hunting Creek	County of Fairfax	6	1	2	223,204	35,350.00	do	1958
1	Newport News	Hampton Roads Sanitary District Commission	7	1	2	322,050	36,994.00	September	1957
1	Occoquan	Occoquan Woodbridge Sanitary District	1	1	1	164,800	28,790.00	December	1957
2	Richmond	City of Richmond	7	1	2	1,772,334	77,071.00	June	1957
3	Selma	Alleghany County	3	1	1	28,918	8,463.00	do	1957
1	Suffolk	City of Suffolk	4	7	1	666,003	178,128.00	January	1958
3	Warm Springs	Warm Springs Sanitary District	1	7	1	29,322	8,183.00	July	1957
1	Williamsburg	City of Williamsburg	3	1	3	405,900	116,798.00	January	1958
2	Woodstock	Town of Woodstock	1	1	1	122,120	12,520.00	do	1958
	State total					10,684,445	1,618,775.00		

WASHINGTON, STATE ALLOTMENT, $1,511,900

1	Aberdeen	City of Aberdeen	4	5	1	$1,394,266	$250,000.00	September	1957
1	Asotin	Town of Asotin	1	5	4	83,471	25,041.45	October	1957
2	Bellevue	Bellevue Sewer District	1	1	7	184,068	55,220.40	March	1957

1	Bothell	Town of Bothell	1	6	1	147,520	44,256.00	do	1957
2	Camas	City of Camas	2	4	1	50,552	15,165.62	September	1957
2	Chehalis	City of Chehalis	3	1	2	34,054	10,216.22	December	1957
1	Cowiche	Cowiche Sewer District	1	9	1	15,600	4,680.00	April	1957
1	Dayton	City of Dayton	2	3	3	12,000	3,600.00	September	1957
1	Des Moines	Des Moines Sewer District	1	6	1	156,363	46,908.90	October	1957
3	Edmonds	City of Edmonds	1	6	1	200,000	59,944.44	March	1957
3	Elma	Town of Elma	1	6	3	63,271	18,900.00	January	1957
1	Grays Harbor	Grays Harbor County SID	6	9	1	35,322	10,596.60	do	1958
2	Harrah	Town of Harrah	1	6	1	27,100	8,130.00	April	1957
1	Hoquiam	City of Hoquiam	4	9	1	615,480	184,644.00	March	1957
2	Ilwaco	Town of Ilwaco	1	5	1	128,700	37,560.00	August	1957
3	Montesano	City of Montesano	1	2	1	122,676	34,769.34	February	1957
3	Palouse	City of Palouse	1	5	1	84,958	24,088.80	do	1957
1	Quincy	Town of Quincy	1	9	1	73,213	21,960.00	October	1957
1	Rainier Vista	Rainier Vista Sewer District	2	6	1	202,680	60,804.00	December	1957
2	Redmond	Town of Redmond	1	9	1	88,982	26,694.60	October	1957
2	Republic	Town of Republic	1	9	1	46,390	12,194.33	August	1957
3	Seattle	City of Seattle	8	1	2	690,790	207,237.00	February	1957
3	Sedro Woolley	City of Sedro Woolley	2	6	1	63,308	18,992.39	January	1957
2	Sumner	City of Sumner	2	1	1	176,072	52,821.47	February	1957
2	Sunnyside	City of Sunnyside	2	1	2	316,600	94,980.00	November	1957
3	Ticton	Town of Ticton	1	1	1	16,423	4,926.91	February	1957
2	Yakima	City of Yakima	5	1	2	228,600	64,840.80	September	1957
	State total					5,258,459	1,399,173.27		

WEST VIRGINIA, STATE ALLOTMENT, $1,795,725

2	Moundsville	City of Moundsville	4	7	1	$203,192	$60,957.00	January	1958
2	New Martinsville	City of New Martinsville	2	7	1	600,000	180,000.00	do	1958
1	Princeton	City of Princeton	3	1	2	139,624	41,887.00	February	1958
2	Ravenswood	Town of Ravenswood	1	7	1	171,760	51,528.00	December	1957
1	Weirton	City of Weirton	4	1	1	1,516,000	250,000.00	February	1958
1	Weston	City of Weston	3	7	1	845,651	250,000.00	September	1957
1	Whitesville	Town of Whitesville	1	7	1	98,025	29,407.00	February	1958
2	Williamstown	City of Williamstown	1	7	1	219,400	65,820.00	August	1957
2	Williamson	City of Williamson	3	5	1	1,043,352	250,000.00	October	1957
	State total					4,837,004	1,179,599.00		

Complete listing—All projects approved under sec. 6 of the Federal Water Pollution Control Act—Continued

WISCONSIN, STATE ALLOTMENT, $1,946,350

Status	Location	Name of applicant	Population code	Description	Type construction	Estimated eligible project cost	Federal grant offer	Project approved	
								Month	Year
2	Athens	Village of Athens	1	1	1	$102,282	$28,148.70	January	1957
1	Bayfield	City of Bayfield	1	5	1	161,969	47,255.70	October	1957
2	Boloit	Beloit	5	7	1	893,250	250,000.00	January	1957
2	Brodhead	City of Brodhead	1	7	1	120,845	36,253.48	do	1957
1	Cambria	Village of Cambria	1	7	1	105,413	31,624.00	October	1957
2	Casco	Village of Casco	1	1	1	84,000	25,000.00	January	1957
2	Clinton	Village of Clinton	1	1	1	115,000	34,500.00	do	1957
1	Devils Lake	Devils Lake State Park	4	5	4	37,306	11,191.95	October	1957
1	Dodgeville	Iowa County Hospital Home	1	1	1	45,407	13,622.32	March	1958
1	Durand	City of Durand	1	7	1	169,016	50,704.80	October	1957
1	Florence	Town of Florence	1	9	1	54,650	16,395.00	do	1957
1	Genoa City	Village of Genoa City	1	6	4	118,620	35,586.00	do	1957
2	Independence	City of Independence	1	7	1	72,342	20,802.62	January	1957
2	Lafarge	Village of Lafarge	1	5	1	108,022	30,126.60	do	1957
1	Lake Delton	Village of Lake Delton	1	5	1	155,096	46,528.80	October	1957
1	Lomira	Village of Lomira	1	2	1	72,175	21,652.46	do	1957
2	Mazomanie	Village of Mazomanie	1	5	1	140,400	39,478.00	January	1957
2	Menomonie	City of Menomonie	3	1	3	275,161	76,392.30	do	1957
1	Merrillan	Village of Merrillan	1	7	1	46,992	14,097.60	October	1957
2	Milwaukee	City of Milwaukee	9	1	2	300,430	90,129.00	do	1957
1	New Glarus	Village of New Glarus	1	1	1	374,072	76,387.50	do	1957
1	Osceola	Village of Osceola	1	5	1	111,947	33,584.10	do	1957
1	Phillips	City of Phillips	1	1	1	119,653	35,895.93	do	1957
2	Portage	City of Portage	3	1	3	149,000	44,700.00	January	1957
1	Rib Lake	Village of Rib Lake	1	1	1	130,000	36,120.00	October	1957
2	Sheboygan	City of Sheboygan	5	1	7	641,667	137,872.05	November	1957
1	Shiocton	Village of Shiocton	1	1	1	148,863	19,695.60	October	1957
1	Sturtevant	Village of Sturtevant	1	5	1	205,800	61,740.00	do	1957
2	Superior	City of Superior	4	7	1	1,651,775	250,000.00	December	1956
2	Twin Lakes	Village of Twin Lakes	1	6	1	183,924	55,177.09	January	1957
1	Viola	Village of Viola	1	7	1	140,812	42,243.60	October	1957
1	Washburn	City of Washburn	1	5	1	140,012	38,913.00	do	1957
2	West Salem	Village of West Salem	1	7	1	87,346	26,203.99	do	1957
1	Whitehall	City of Whitehall	1	7	1	232,650	69,795.00	do	1957
2	Whitewater	City of Whitewater	2	1	2	125,000	37,500.00	January	1957
2	Williams Bay	Village of Williams Bay	1	1	2	89,610	26,883.00	do	1957
	State total					7,710,507	1,912,200.19		

WYOMING, STATE ALLOTMENT, $891,125

1	Casper	City of Casper	4	5	1	$1,338,475	$250,000.00	March	1957
1	Chugwater	Town of Chugwater	1	9	1	25,635	7,690.57	October	1957
1	Cody	City of Cody	2	9	1	106,800	31,740.00	March	1958
2	Douglas	Town of Douglas	2	9	1	102,275	30,322.00	February	1957
1	Dubois	Town of Dubois	1	9	1	79,736	23,921.00	August	1957
1	Encampment	Town of Encampment	1	9	1	41,972	12,591.81	January	1958
1	Frannie	Town of Frannie	1	9	1	16,112	4,683.75	December	1957
1	Glenrock	Town of Glenrock	1	9	1	37,700	11,310.00	October	1957
2	Laramie	City of Laramie	3	9	1	290,700	86,760.00	December	1956
2	Lovell	Town of Lovell	2	9	1	71,703	21,511.06	September	1957
1	Mills	Town of Mills	1	9	1	74,175	22,252.50	do	1957
2	Pinedale	Town of Pinedale	1	9	1	52,787	17,835.67	March	1957
1	Powell	Town of Powell	1	9	1	126,000	37,800.00	December	1957
3	Saratoga	Town of Saratoga	1	9	1	63,915	9,044.00	March	1957
1	Thermopolis	Town of Thermopolis	2	5	1	281,156	84,346.80	September	1957
2	Torrington	Town of Torrington	2	9	1	92,768	25,859.27	March	1957
1	Wamsutter	Town of Wamsutter	1	9	1	21,332	6,399.85	January	1958
2	Worland	City of Worland	2	9	1	158,488	47,546.55	September	1957
	State total					2,981,729	731,614.83		

HAWAII, ALLOTMENT, $1,000,425

2	Honolulu	City and County of Honolulu	8	3	1	$165,000	$44,791.97	February	1957
1	do	do	8	7	1	836,964	250,000.00	December	1957
	State total					1,001,964	294,791.97		

PUERTO RICO, ALLOTMENT $2,363,275

1	Bayamon	Puerto Rico Aqueduct and Sewer Authority	4	3	1	$1,404,000	$250,000.00	June	1957
1	Catano	do	3	3	1	590,000	177,000.00	do	1957
1	Guaynabo	do	1	3	1	105,000	31,500.00	do	1957
1	Gurabo	do	2	5	1	112,000	33,600.00	do	1957
1	Hormigueros	do	1	6	1	84,000	25,200.00	do	1957
1	Lajas	do	1	5	1	115,000	31,500.00	do	1957
1	Puerto Nuevo	do	7	3	1	130,400	39,120.00	February	1958
1	Rincon	do	1	5	1	58,000	17,400.00	June	1957
1	San Juan	do	7	3	1	1,540,000	250,000.00	December	1957
2	do	San Juan-San Jose	8	3	1	1,485,880	250,000.00	June	1957
1	Trujillo Alto	Puerto Rico Aqueduct and Sewer Authority	1	5	1	74,000	22,200.00	do	1957
	State total					5,698,280	1,127,520.00		

Explanatory Notes

Status: Status of projects is indicated as follows:
1—Project approved (grant offer made).
2—Project under construction.
3—Project completed.

Population code: Federal grants made on a basis of population:
1—Less than 2,500.
2—2,500 to 5,000.
3—5,001 to 10,000.
4—10,001 to 25,000.
5—25,001 to 50,000.
6—50,001 to 125,000.
7—125,001 to 250,000.
8—250,001 to 500,000.
9—500,001 and over.

Description: Description of the project as outlined in project application:
1—Treatment plant.
2—Outfall sewer.
3—Intercepting sewer.
4—Other.
5—Treatment plant, outfall sewer, and intercepting sewer.
6—Treatment plant and outfall sewer.
7—Treatment plant and intercepting sewer.
8—Outfall sewer and intercepting sewer.
9—Waste stabilization ponds with appurtenances.

Type construction: Type of construction as described in the application:
1—New.
2—Extension or addition.
3—Remodeling and alteration.
4—New, extension and remodeling.
5—New and extension.
6—New and remodeling.
7—Extension and remodeling.

Construction grant projects by population groups, as of Mar. 31, 1958

Population	Number of projects	Cumulative percent number	Estimated project cost	Cumulative percent estimated cost	Federal grant offers made	Cumulative percent grant offers
Less than 2,500	458	48	$61,336,084	16	$16,842,012.60	21
2,500 to 5,000	152	64	42,563,021	28	11,986,057.71	36
5,001 to 10,000	129	78	54,119,362	42	14,629,599.81	55
10,001 to 25,000	104	89	80,856,091	64	16,923,701.98	76
25,001 to 50,000	45	94	48,678,319	77	8,299,652.18	87
50,001 to 125,000	24	96	27,747,421	84	4,044,050.60	92
125,001 to 250,000	17	98	23,317,240	91	2,711,497.40	95
250,001 to 500,000	11	99	16,974,561	95	2,430,732.97	98
500,001 and over	7	100	18,484,269	100	1,256,974.50	100
Total	947		374,076,368		79,124,279.75	

Cumulative summary showing the number and eligible costs of projects approved and the amount of Federal grant offers, by State and status of construction as of Mar. 31, 1958

Projects—State	Total approved			Under construction			Completed			Total allotments	Grants requested*	Grants made
	Number	Eligible costs	Federal grant offers	Number	Eligible costs	Federal grant offers	Number	Eligible costs	Federal grant offers			
Total	947	$374,076,368	$79,124,279	417	$187,844,211	$37,576,369	86	$12,222,398	$3,049,263	$100,000,000	$144,515,117	$79,124,279.75
Alabama	14	12,242,466	2,290,547	5	5,006,991	885,804	1	392,875	117,863	2,307,300	3,807,047	2,290,546.71
Arizona	12	3,425,641	1,026,980	4	1,720,002	516,000	1	239,266	71,147	1,145,125	1,445,035	1,026,979.68
Arkansas	25	6,026,352	1,363,513	8	1,071,076	278,130	1	62,666	15,809	2,078,025	1,649,968	1,363,512.57
California	27	11,066,949	2,818,974	22	8,500,784	2,132,845	2	527,200	157,829	4,105,800	9,498,175	2,818,974.47
Colorado	18	5,101,012	1,260,916	10	3,354,520	819,653	2	74,232	19,639	1,260,975	2,063,154	1,260,916.33
Connecticut	6	4,928,515	1,173,865	4	3,515,935	771,465				1,254,850	1,419,865	1,173,865.24
Delaware	5	2,280,168	654,896							696,800	781,616	654,896.40
District of Columbia	2	6,279,928	362,500	1	5,904,928	250,000				899,325	683,150	362,500.00
Florida	17	6,210,446	1,761,379	4	2,173,142	613,960				1,818,325	5,706,074	1,761,379.44
Georgia	17	9,807,883	2,014,272	4	1,946,685	505,025				2,273,850	2,014,271	2,014,271.50
Idaho	9	4,495,986	1,035,836	3	402,517	117,100				1,169,800	1,035,836	1,035,836.03
Illinois	25	11,022,909	2,723,079	17	8,449,462	1,993,282	1	428,245	128,473	3,501,875	5,338,552	2,723,078.66
Indiana	17	12,015,436	2,057,125	11	3,127,042	854,645				2,057,125	5,162,230	2,057,125.00
Iowa	29	9,363,923	1,701,336	14	5,315,566	967,764	5	601,374	105,669	1,755,525	3,249,293	1,701,336.24
Kansas	28	6,254,079	1,477,085	16	4,741,908	1,148,075	11	837,001	195,510	1,482,700	1,477,085	1,477,085.00
Kentucky	18	9,283,636	1,794,628	4	3,932,949	545,051	2	1,416,947	241,691	2,142,750	2,969,643	1,794,627.91
Louisiana	20	6,263,888	1,787,114	11	3,160,673	919,588	2	514,228	136,279	1,987,325	2,095,636	1,787,113.72
Maine	3	980,230	294,069	1	116,230	34,869				1,261,775	294,069	294,069.00
Maryland	14	6,763,785	1,483,406	5	1,887,739	421,261	2	1,498,477	392,925	1,500,350	1,911,984	1,483,406.02
Massachusetts	11	5,521,703	1,242,968	2	769,791	230,937	2	133,127	37,420	2,263,575	1,720,068	1,242,967.76
Michigan	26	9,273,365	2,543,965	17	5,934,139	1,646,766	1	134,366	38,505	2,775,950	6,850,811	2,543,965.33
Minnesota	20	6,649,201	1,852.700	7	2,545,909	695,613				1,852,700	6,497,295	1,852,700.00
Mississippi	11	3,313,479	646,060	4	596,377	178,943	2	84,542	24,979	2,352,925	725,732	646,059.88
Missouri	39	11,447,734	2,113,207	22	7,431,053	1,053,282	5	450,028	55,161	2,120,725	4,950,616	2,113,207.30
Montana	12	2,287,995	583,710	3	508,792	144,305	2	50,998	14,144	1,006,975	759,247	583,709.74
Nebraska	24	5,583,491	1,315,087	5	1,583,778	449,080	2	40,739	9,030	1,335,225	1,328,224	1,315,086.78
Nevada	2	491,000	147,300							655,975	248,300	147,300.00
New Hampshire	7	2,252,649	625,795	2	353,500	106,050				1,072,975	651,295	625,794.80
New Jersey	13	15,900,808	2,194,698	9	6,048,939	1,365,453				2,223,725	2,517,198	2,194,697.93
New Mexico	20	4,440,498	1,257,023	5	1,407,277	400,988	2	180,887	41,866	1,259,700	1,258,823	1,257,023.40
New York	36	30,382,675	4,380,810	11	15,140,568	1,225,060				5,496,225	11,197,383	4,380,809.59
North Carolina	25	11,658,434	2,526,540	12	7,994,453	1,449,206				2,543,100	3,677,500	2,526,540.00
North Dakota	43	2,633,964	771,385	13	771,035	238,587	8	425,473	104,572	1,378,825	1,120,548	771,385.21
Ohio	33	15,795,258	3,205,976	21	12,637,801	2,372,735	3	1,166,598	336,435	3,308,425	7,588,856	3,205,976.03
Oklahoma	24	7,717,289	1,703,785	16	6,704,320	1,461,170	4	428,547	79,812	1,724,550	2,374,189	1,703,785.07
Oregon	20	4,384,518	1,126,256	8	2,497,201	564,044	5	449,263	131,841	1,298,700	1,534,129	1,126,255.88
Pennsylvania	25	20,697,180	3,675,260	16	12,604,027	2,345,417	1	273,728	69,822	4,196,375	6,912,560	3,675,260.27
Rhode Island	6	1,981,180	581,177	4	1,217,180	352,177				1,030,100	581,177	581,177.50
South Carolina	18	4,940,414	1,448,968	4	549,486	151,698	2	184,423	54,255	2,002,625	1,698,968	1,448,967.98

South Dakota	27	3,077,206	707,205	8	637,178	164,287	5	102,077	20,225	1,324,825	707,205	707,204.84
Tennessee	15	9,235,074	2,252,799	5	2,929,236	820,920				2,266,125	5,676,395	2,252,799.21
Texas	40	13,754,373	3,354,500	18	8,920,837	1,932,691	2	161,510	44,813	3,432,825	5,069,239	3,354,499.93
Utah	6	6,733,560	1,071,601	5	6,560,846	1,019,787				1,179,700	1,817,256	1,071,601.14
Vermont	3	1,937,700	450,310							1,131,975	600,310	450,310.00
Virginia	32	10,684,445	1,618,775	17	6,072,747	712,734	2	58,240	16,646	2,052,975	2,105,902	1,618,775.00
Washington	27	5,268,459	1,399,173	10	1,281,118	377,823	7	1,241,426	368,859	1,511,900	1,984,434	1,399,173.27
West Virginia	9	4,837,004	1,179,599	5	2,237,704	608,305				1,795,725	3,172,045	1,179,599.00
Wisconsin	36	7,710,507	1,912,200	17	5,161,169	1,209,167				1,946,350	4,331,141	1,912,230.19
Wyoming	18	2,981,729	731,615	5	768,721	229,835	1	63,915	9,044	891,125	792,776	731,614.83
Hawaii	2	1,001,964	294,792	1	165,000	44,792				1,000,425	294,792	294,791.97
Puerto Rico	11	5,698,280	1,127,520	1	1,485,880	250,000				2,363,275	1,168,020	1,127,520.00
Alaska										851,625		
Virgin Islands										1,652,175		

PROGRESS OF PROGRAM

Senator HILL. I do not mean to stop you, sir.

Do you have anything else on this, Mr. Hollis?

Mr. HOLLIS. No, sir; I think that covers it, sir.

Senator HILL. The program has been going forward very successfully up to date; has it not?

Mr. HOLLIS. Yes, sir.

Senator HILL. That certainly has been my observation in my State.

You have filed your statement in full for the record?

Mr. HOLLIS. Yes, sir.

Senator HILL. Thank you very much.

Mr. HOLLIS. Thank you, sir.

LETTER FROM SENATOR KERR

Senator HILL. I have letters from Senator Kerr, of Oklahoma, together with a statement by him and certain pertinent material, in which he urges an additional appropriation to more adequately provide for research on the problem of controlling pollution on the Arkansas and Red Rivers. The material will be included in the hearings.

(The material referred to follows:)

UNITED STATES SENATE,
Washington, D. C., April 7, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Appropriations for Department of Labor and Health, Education, and Welfare, United States Senate.

DEAR LISTER: I transmit herewith a statement, and accompanying attachments, in support of appropriations to carry on a study to determine the best means of eliminating and controlling pollution on the Arkansas and Red Rivers.

I sincerely request that careful consideration be given to this item, in the hopes that adequate funds can be made available to carry out this worthwhile project.

With kindest regards, I am

Sincerely yours,

ROBERT S. KERR.

STATEMENT OF SENATOR ROBERT S. KERR BEFORE THE SUBCOMMITTEE ON HEALTH, EDUCATION, AND WELFARE APPROPRIATIONS COMMITTEE, UNITED STATES SENATE, IN SUPPORT OF INCREASING FUNDS FOR RESEARCH UNDER PUBLIC LAW 660

The findings of the Arkansas-White-Red Basins Inter-Agency Committee and their studies of the development of the water and land resources of these basins, and now printed and contained in Senate Document No. 13, 85th Congress, 1st session, indicate the desirability of further study and research in the field of water pollution.

It is believed that up to 50 percent of the water now rendered useless by pollution may be reclaimed and thus be beneficial for industrial, municipal, and farm use.

Such a research project, on a cooperative basis with the States and departments of the Federal Government, will probably cost $850,000. The States, through contribution of personnel, services, and money may be expected to contribute more than half of the total costs.

The States' interest is manifested in the attached resolution from the Interstate Compact Commission on the Red River, composed of representatives of Arkansas, Louisiana, Oklahoma, and Texas.

In my State of Oklahoma, the State agencies which will contribute to the survey consist of: Oklahoma Water Board, Oklahoma Planning and Resources

Board, the Oklahoma Fish and Game Commission, the Corporation Commission of Oklahoma, the State Health Department, and the Oklahoma Development Council. Also, several cities and industries will cooperate.

The proposed study will be broken down into 4 phases:

Phase (1) will be devoted entirely to the bringing together of all the information relative to the quantity and quality of water in the Arkansas and Red Rivers and their tributaries. There is much information available in State agencies and various Federal agencies on this subject but it has not been brought together into one central agency where it can be studied and evaluated.

Phase (2) of the program will be to determine the cause and source of pollution. It is readily recognized that in the drainage area of the Arkansas and Red River Basins there are many sources of man-made pollution which can be corrected by the application of legal means now available. However, there are certain souces of industrial pollution which may require additional State and Federal legislation. There are also sources of natural pollution which, from the standpoint of affecting the useability of water supplies, are just as detrimental as much of the industrial and man-made pollution problems.

Phase (3) of this study would be to determine methods whereby the source of pollution might be eliminated and thus make available great quantities of water for municipal, industrial and recreational use, which is now polluted beyond utilization.

Phase (4) of the study would be the actual construction of projects to eliminate the pollution. This phase is not included as a part of the laboratory study which is now being proposed.

I am advised that contained in the appropriation items for the Public Health Service is a small item of approximately $70,000 which can be used for this purpose. It is hoped that this year's appropriation can be increased to $150,000 for the Public Health Service. Other Federal departments should be given a total equal amount.

This budget was made up over a year and a half ago, prior to the time that the other Federal departments had begun to express an interest in this study as it relates to the construction and operation of authorized projects, and at a time when ceilings were fixed by the Bureau of the Budget and eliminated any new programs or expansions of existing ones.

Therefore, I urge that this committee increase the appropriation for the Public Health Service by $150,000 for this fiscal year in order that the proposed project may be gotten underway and moved forward without delay and waste.

It is suggested that the appropriation of these funds will make it possible to finish this survey in a matter of 2 or 3 years, where the small amount of money now available will cause it to drag out over many years, thus depriving the area and the United States of the results that may be attained by acceleration of the project.

RESOLUTION

Whereas fresh water is our Nation's No. 1 resource and must not be destroyed by manmade pollution ever; and

Whereas the future of our economy and the welfare of our Nation depends upon the development and the resource of the great Southwest; and

Whereas the Red River is a great important artery of water supply of the Southwest traveling through the great States of Oklahoma, Texas, Arkansas, and Louisiana; and

Whereas it is paramount to the Nation's welfare and economy that this great water supply be preserved and used to its greatest capacity; and

Whereas United States Public Health Service has started pilot study in the Red River Basin to identify existing sources of pollution, whether natural or manmade, and to devise ways and means of abating this pollution; and

Whereas substantial progress has been made in this study under the skilled and aggressive leadership of Dr. Dwight F. Metzler, of the Kansas State Board of Health, acting as consultant: Therefore be it

Resolved, That the representatives of the States of Oklahoma, Texas, Arkansas, and Louisiana, on the Red River Compact Commission now in session, do petition the Congress of the United States to make adequate funds available for this

study to assure the availability of an abundant supply of potable water now and in the years to come.

Adopted this 27th day of February 1958.

LEONARD WHITE,
Representative, State of Arkansas.
CALVIN T. WATTS,
Representative, State of Louisiana.
FRANCIS J. BORELLI,
Representative, State of Oklahoma.
JOHN J. LEDBETTER,
Representative, State of Texas.

NOTES ON SUPPORT FOR THE ARKANSAS-RED WATER CONSERVATION PROJECT

1. EXPECTED STATE CONTRIBUTIONS—PERSONNEL AND DIRECT SERVICE

Texas	$16,000
New Mexico	2,000
Oklahoma	6,000
Kansas	11,000
Total	35,000

2. LIST OF STATE AGENCIES EXPRESSING INTEREST IN THE PROJECT

Texas:
- State department of health.
- Board of water engineers.
- Cities:
  - Fort Worth Water Department.
  - Dallas Water Department.
  - Dennison Water Department.

New Mexico: Department of public health.

Oklahoma:
- Department of health.
- Water resources board.
- Oklahoma Corporation Commission.
- Cities:
  - Oklahoma City Water Department.
  - Bartlesville Water Department.

Kansas:
- State board of health.
- Water resources board.
- City: Wichita Water Department.

Arkansas:
- Governor's office.
- State board of health.

Louisiana:
- State department of health.
- Department of public works.
- City: Shreveport Water Department.

3. FEDERAL AGENCIES

Corps of Engineers: Water resource development and use (letter from General Seeman to Chief of Engineers, attached).

Soil Conservation Service: Small watershed development program.

Department of Interior:
- Bureau of Reclamation: Water resource development and irrigation.
- United States Geological Survey: Technical support.
- Fish and Wildlife Service: Conservation.
- Bureau of Mines: Oil industry development.

Federal Power Commission: Stream regulation requirement (low flow).

4. COMPACTS

Red River compact (February 1958 resolution).
Oklahoma-Arkansas Compact Committee (letter of support).
Oklahoma-Kansas Compact Committee (letter of support).

5. OTHER

Arkansas-White-Red Basins Interagency Committee (support at November 1957 meeting).
Arkansas Basin Development Association (resolution).

OCTOBER 31, 1957.

Subject: Pollution survey—Arkansas and Red River Basins.
To: Chief of Engineers, Department of the Army, Washington, D. C.

1. Reference is made to the personal letter from General Person on October 15, 1957, regarding Mr. Don McBride's mention of, and interest in, a pollution survey which the United States Public Health Service, Department of Health, Education, and Welfare, has been authorized to make.

2. Subsequent to the receipt of that letter this office discussed the subject informally with regional officials of the United States Public Health Service. Although it is stated that the study will be on the Arkansas River basin, actually it will cover the Arkansas River Basin upstream from Little Rock, Ark., and the Red River Basin upstream from Shreveport, La. The survey which is entitled "The Arkansas-Red River Water Quality Conservation Study" was initiated in July 1957 by the United States Public Health Service, and its purpose is to supplement water resources development planning in the respective basins and to carry out responsibilities under the Federal Water Pollution Control Act.

3. The study plans envision a four-phase activity with phase I now in progress. Phase I is being utilized to assemble and evaluate all known documented information on water quality. Phase II would supplement the first phase with necessary field investigations and additional basic data. Phase III will be devoted to the practical and feasible studies and the preparation of a plant to control the pollution. Phase IV which will provide for actual implementation of the plan is not considered to be a Public Health Service activity, but rather one for constructing agencies.

4. As regards the estimated cost of the survey, it is understood that such cost will be very considerably in excess of the amount of $300,000 which Mr. McBride mentioned in his letter. Fairly large amounts will be required each year during the course of the program, at present envisioned as requiring about 4 years, how much, however, is not known at this time.

5. In the opinion of this office the corps will have quite a large stake in the results of the United States Public Health Service study. It would be very desirable for the corps to have these results at the earliest practicable date so that full consideration may be given to them in our planning for the projects we have authorized. This is considered particularly important with regard to the Arkansas River multiple-purpose plan which is now in progress. Actually if the corps is to be brought into the study as a major participant it would be preferable to do so without delay so as to insure if possible that the basic data and deductions to be obtained therefrom would fully cover those problems for which the corps would have responsibility.

6. To date the corps has not participated in these basinwide pollution studies, but there have been some informal discussions with United States Public Health Service officials. There has, however, been active participation in a cooperative State and Federal joint water quality study on Lake Texoma. In this connection there are inclosed two memoranda relating to a meeting that was held at Muskogee, Okla., on September 10, 1957. The first memorandum, dated September 11, 1957, was prepared by Mr. Albert E. Coldwell, Chief, Planning Section, Engineering Division, Tulsa District, and the second, dated September 19, 1957, by Mr. Keith S. Krause, Assistant Regional Engineer, United States Public Health Service, region 7, Department of Health, Education, and Welfare, Dallas.

L. E. SEEMAN,
Brigadier General, United States Army,
Division Engineer.

Water Quality Management

Statement of Mr. Dwight F. Metzler, Project Consultant, Arkansas-Red River Water Quality Study before the Water Pollution Control Advisory Board, November 1, 1957

Dr. Burney, Mr. Cunningham, members of the President's Water Pollution Control Advisory Board, distinguished guests, and friends, it is a pleasure to speak to you for a few minutes about this water quality project which the Dallas regional office has undertaken. The quality of water is of vital importance to this great Southwest area, and your meeting here today is being noted by many residents in Kansas, Oklahoma, Texas, Arkansas, and Louisiana, who think that increasing the net usable water supply is one of the most important problems facing them. Within the last 60 days newspapers have reported separate statements by the Governors of Kansas, Oklahoma, and Texas indicating that the "water problem" is the most important one facing their States. This indicates how important water is to this Southwest area, not just in the eyes of the experts, but in the eyes of political leaders and everyday citizens.

In years gone by there was a great debate as to whether man sprang from an aquatic environment, but this is unimportant to our discussion today. What is important is that since the beginning of time man has depended upon an adequate amount of good quality water. This is undebatable. Not only is water necessary for the maintenance of life, but it must be available in good quantity, relatively free from pollutants to support our modern culture based upon an expanding municipal-industrial foundation.

Through the centuries man has fought a constant battle to avoid eating or drinking the wastes of other men. The degree to which he has been successful at any particular period in history has in large part determined the level of civilization at that time. The success of such outstanding civilizations as the Persians, the Egyptians, the Romans, and the Greeks was due in substantial part to the maintenance of high sanitation standards, especially in the procurement of water and the disposal of wastes.

Perhaps the importance of water quality conservation is best emphasized by reviewing the experience of the Romans—they were much like us in many ways—great organizers, exploiters of natural resources, good administrators, and the best engineers of their time. But in the years of decline of the Roman Empire, their writings carried increasing reference to water shortages, polluted streams, and soil exhaustion.

The greatest lawyer of a race of master lawyers—Cicero—gave the clue to what was needed and some wise words for us who are concerned with water conservation today, when he said, "True law is right reason in agreement with nature, worldwide in scope, unchanging, everlasting. We may not oppose or alter that law, we cannot abolish it, we cannot be freed of its obligations by any legislature."

Both laws and plans for the use of water in the Arkansas and Red Rivers must be in agreement with nature, for here, more than in most places, nature has a major effect upon water quality. The large variation in rainfall, the soluble mineral deposits exposed to leaching and solution, the flash floods, the intermittent streams, the great reservoirs of oil and salt water—all of these factors affect the quality of water in these two large river basins.

The study of water quality conservation in the Arkansas and Red River Basins is the result of a need expressed by many local and State representatives, industry officials, and just ordinary people who want water of good quality for a great variety of beneficial uses. The awareness of the importance of water quality was increased by the studies of the Arkansas-White-Red Basins Intergency Committee and it was sharpened by the compact negotiations of 5 States which are involved in 3 separate compacts to allocate the waters of both rivers. It remained, however, for the regional office staff working closely with their Washington counterparts and Mr. Cunningham to develop a program for studying the factors which contribute to the mineral degradation of waters of the Arkansas and Red Rivers. In addition to that, the interest which this Board has shown in the study has been helpful and has greatly increased its chances of success.

I will report to you on the project in four phases: (1) The problems, (2) objectives of the study, (3) how the investigation has been organized, and (4) the progress which has been made since July. You will appreciate that in an area of 219,000 square miles with the complex combination of manmade and

natural pollution that only the broad outlines of the problem can be sketched after 4 months of investigation.

The principal problem of water quality in the Southwest is inorganic pollution from both natural and manmade sources. Organic pollution has been reasonably controlled for several decades.

Natural pollution and oilfield brines are adversely affecting over 5,000 miles of waterways in these 2 basins and more than 40 million acre-feet of runoff annually.

Here is the Arkansas River [indicating] starting in Colorado, flowing through Kansas and Oklahoma and finally into the Mississippi River below Little Rock. Its tributaries are the Cimarron River and the North Canadian and Canadian Rivers which come in with smaller streams up here [indicating]; and then from the north out of Kansas flow the Neosho and Verdigris Rivers.

The Red River rises in New Mexico, and as you all know it forms much of the boundary between Oklahoma and Texas, finally flowing through Louisiana into the Mississippi River below Shreveport. Its principal tributary, the Washita, joins it here [indicating] where one of the large manmade lakes forms Lake Texoma. The quality of water in this basin has been a matter of concern for much longer than our lifetime. The early explorers of this area noted the water quality and some of their writings are most interesting. In his diary Josiah Gregg, explorer and trader of the 1840's, gives an apt description of the Red River Basin. He said, "One of the greatest defects of this country (beside the scarcity of water produced by droughts) is the great natural scarcity on account of the almost absolute lack of constant springs; wherefore, even the largest creeks stop running during the dry weather and the inhabitants are often constrained to the use of water from standing pools, which is generally very bad. It is true there are a few springs (small) which do not go dry, but they are rare." Other reports of early explorers dating from the 1700's refer to salt deposits, accumulations of plaster of paris, and intermittent streams. Some of the streams discovered by the explorers were of excellent quality—"sweet of taste and cool."

References to water quality are made in Adventures on Red River by Captains Marcy and McClellan; Tixiers Travels on the Osage Prairies, by McDermott; and Teodoro de Croix and New Frontier of New Spain (1776–83).

The study starts at Great Bend and includes the Arkansas River and its tributaries to Little Rocky. It also includes the Red River tributaries and the Red River from the headwaters here [indicating] in New Mexico to Shreveport, La. This is a widely varied area in natural topography and rainfall. Rainfall in this area [indicating] is less than 10 inches per year and the amount increases about 1 inch for every 17 miles to the southeast, until in this area [indicating Louisiana] the rainfall averages about 60 inches per year. The streams west of a line through here [indicating a north-south line through Gainesville, Tex.] are flashy intermittent streams, with big flows during floodtime, and dry 2 or 3 days after a flood is over. In the eastern part of the basins the tributaries contribute sufficiently so that the streams are perennial.

There are many oilfields in the basin, and you have already heard their effect on water quality discussed. In addition, natural factors substantially affect the pollution load on the streams. For example, the geological formation of calcium sulfate some 40 miles wide called the Glaine formation, extends northward from Texas through western Oklahoma into Kansas. Where this formation is exposed to weathering the runoff dissolves the rock to produce a high sulfate water, particularly in the Washita River. There are also some natural salt deposits along some of the streams; during times of runoff the salt goes into solution to produce relatively high concentrations of chlorides.

During the years of the drought there was still much water in the two rivers. In the driest year of record the flow past Shreveport was 6.5 million acre-feet and 6.1 million acre-feet past Little Rock. If this water had been of good quality the impact of the drought would have been lessened. With increased water use and the depletion of ground water the surface water resources become doubly important to the growth of the regional economy.

Careful studies in 1954 indicated that the municipal demands for water would increase about 2½ times in the 21-year period to 1975, but on the basis of the last 2 years' experience these figures appear very conservative. Cities such as Dallas, Oklahoma City, and Tulsa have already experienced water shortages. Other cities in the basin have been threatened to the extent that water has been pumped through refined oil products pipelines, hauled in railroad tank cars and

the wastes of one city have been reused by others downstream. These extreme conditions were caused by the failure of surface-water supplies.

Perhaps the Dallas experience, because of the national attention it received, would provide an interesting case history. Before the Dallas water shortage ended in the spring of 1957, the city was forced to extend a pipeline to the Red River to supplement its water supply. The Red River water was mineralized and reached a peak chloride concentration of 2,000 parts per million. Chlorides in the Dallas tap water reached 1,430 parts per million. For a 3-month period in 1956, 45,000 tons of salt were pumped into the Dallas water system from the Red River. This would cover an acre with over 15 feet of the most dense rock salt, or a large city block with about 3½ feet.

During the same period nearly 70,000 tons (67,400) of mineral solids were pumped into Dallas homes and businesses from this one source. This amount of solids would fill 13,500 five-ton trucks—1 each 10 minutes, day and night. Parked bumper to bumper this fleet of trucks would make a line 47 miles long. This mineralized water caused serious problems to Dallas homes and businesses.

Industrial expansion is said to have been hampered for lack of good quality water, and the industrial demand along the Arkansas River is expected to increase about four times by 1975. It will double along the Red River. These estimates may be low. According to the Corps of Engineers, domestic and industrial users have already exceeded the estimates for 1975 made in 1954, and in fact, have developed pumping facilities for 6.8 billion gallons per day—essentially the use estimated for the year 2,000.

The agricultural agencies and the Bureau of Reclamation report that much more supplemental irrigation will be done in both river valleys if water quality is improved.

Now for a few words about the purpose of the study. This study has three objectives—(1) to determine the factors which cause mineral degradation of the water, (2) to identify waters of varying quality and determine their potential for beneficial use, and (3) to develop plans for the improvement of water quality.

Some of the possibilities for improving water quality might be storage, either of good quality water or of poor quality water for release during flood stages, the control of manmade pollution from the salt-processing industry and the oilfields, the planned diversion of poor quality water around impoundments of good water, or sealing of geological formations which are contributing substantial amounts of highly mineralized water.

The study is planned in four phases. The first phase is the assembly of all known documented information on water quality. Some of this is in published form, some is in the offices of industry and municipal government, and some is available from State agencies. In this area the power companies and oil industry have considerable data. This information will be tabulated and analyzed to determine the gaps in existing data. We are well on the way to doing this, and in fact should be completed well before the end of the current fiscal year.

The second phase is to supplement phase 1 with the necessary field investigation and basic data collection to determine the sources and amounts of natural and manmade pollution. This will require additional gaging stations and much additional water quality analyses over a 2-year period. This work is planned for fiscal years 1959 and 1960.

The third phase of the study will be to pull together all of the facts which have been collected and develop plans, with feasibility studies, for controlling pollution.

The fourth phase is the implementation of the plan—this is primarily not a Public Health Service function. This will be left to the interested private agencies, municipal water departments, State authorities and Federal construction agencies.

The interest in water use in the basins, water development by the Federal agencies, and the negotiations of interstate compacts provide compelling and urgent reasons for the early completion of this study. Certainly the maximum use of water resource projects cannot be utilized unless some attention is given to quality, and the water quality objectives of this project are aimed at permitting the maximum beneficial use of the water. Most of the water-resource projects built in these two river basins were constructed without water quality studies. Where water quality has been considered, the basic data have been sparse or inadequate. The maximum use of the projects depends upon the quality of water stored in them. Water quality aspects of those projects which are

not yet under construction need to be determined so that the maximum use of the water can be realized.

The Corps of Engineers reported recently at a meeting of the Arkansas-White-Red Basins Interagency Committee, at Muskogee, Okla., that their multiple purpose projects already constructed had cost $436 million. The estimated cost of those under construction is $567 million, and the cost of authorized projects is more than half a billion dollars in addition. This totals to more than $1½ billion of construction by one agency in which water quality is an important factor. We do not have accurate figures for the Bureau of Reclamation or the Department of Agriculture but these are the other two major Federal construction agencies, and their stake in water quality is important.

Three interstate compacts involving these 2 basins and 5 States are under negotiation. Each of the compacting groups has concluded that water quality must be considered in relation to quantity. The representatives of the States and their Federal counterparts are agreed that little progress can be made, particularly along the Red and lower Arkansas Rivers until the questions to which this study is dedicated are answered.

Now for a word as to how the investigation is organized. The regional engineer and his staff is responsible for directing the investigation of this study, and for its coordination with other agencies—local, State, and Federal. Some of the State agencies working on this project are the water resources boards, geological surveys, corporation commissions, industrial development agencies, universities and colleges and wildlife conservation agencies. On the Federal level the Corps of Engineers, the Bureau of Reclamation, the Arkansas-White-Red Basins Interagency Committee, the Department of Agriculture and the Geological Survey are playing a cooperative role in this investigation. A technical advisory committee helps to maintain this study on the highest professional level so far as geological, hydrological, engineering, and other factors are concerned.

To date considerable progress has been made in acquainting the various agencies with the study. They are giving enthusiastic cooperation and some have offered substantial amounts of manpower to assist the survey.

We have collected and analyzed much of the available data on water quality; flow data are available for about 125 stations in the 2 basins. We are pleased to find some water quality information has been collected by private industry, particularly utilities and oil companies. This has been very helpful in filling in some of the gaps in information collected by the official agencies.

Some time has been spent in developing analytical procedures for the handling and processing of the data. Efforts are still being made to improve these procedures.

A case study has been made of the Dallas water quality problem, primarily because it provided a good example of a city with problems caused by poor water quality. A literature review has been made of the effects of mineral and thermal stratification in lakes and a field study has been started of stratification in Lake Texoma. The purpose of this study is to indicate the water quality conditions in a lake which normally receives high chloride water from one river, high sulfate water from another, and good quality water from both in times of flood flow.

Parts of the problem, of course, in starting an investigation is to become familiar with the area, as well as to find out what work other agencies have done which might be helpful. We made a reconnaissance of part of the area by automobile and of much of the western part of both basins by helicopter. The following slides are typical of what we saw, both in Texas and in Oklahoma.

This first slide is of the Canadian River below Amarillo, and I show it so that you can see that even in the valley of the river there are oil wells and brine ponds. A pond in the river sand is the most successful disposal unit one can have for brine, for no matter how much brine is put in, the pond will never overflow.

The next slide is of another pond receiving oilfield brine. Notice the salt deposits on the downstream toe of the dike. This shows where the brine has seeped from the pond.

The next slide is of a pond in the Wichita Falls area. What you see is typical of the leaching which occurs in pervious soils. Notice the white deposits in the right center of the picture.

The next picture shows brine flowing away from the gun barrel. You will notice the mesquite growing on either side of this rather wide, denuded area. Even mesquite will not grow where the brine has escaped.

This next slide shows a part of the helicopter cabin as well as an outcrop of calcium sulfate. Please notice the white deposit near the bottom of the picture. This is the calcium sulfate of "gyp" deposit which supplies some of the mineralization. You can see the opportunity it has for leaching into the surface waters.

The next slide is of Little Red Creek and that white deposit is not snow, it is salt. This picture was taken in July when no water was flowing in the creek.

The next slide was taken of the same creek right after a rain, and you can see that all of the salt has been redissolved. Incidentally, you can see why they call this Red Creek.

The next slide shows a tributary of Little Red Creek. The red slash you see at the left side of the picture shows the red earth which underlies the salt. This was made by digging through the salt and into the soil several inches.

The next slide is of the same tributary and shows the amount of salt which is crystallized in these tributaries at times of intermittent or zero flow.

The next slide is of the same tributary when we were over it in the helicopter in October. You can see that all of the salt has been redissolved and carried downstream by the recent rains.

The last slide shows some of the terrain in the upper tributaries of the Red River near Amarillo, Tex. You will note how extensive erosion has cut through the multicolored soil and mineral formations.

Now for the conclusions. This type of study is new but it may compare in importance to the Ohio River studies made by the Public Health Service 20 years ago. This survey is properly a function of the Public Health Service in cooperation with the other agencies, Federal, State, and local. The study is an excellent example of the close working relationship between the State health departments, local officials, and the Public Health Service. Whatever can be done by the States—and this work is substantial—will not be duplicated by the Federal staff. On the other hand, the Public Health Service is providing the leadership, part of the staff, and the coordination without which these basinwide studies would be unlikely. Several State health departments are providing substantial assistance, and the assistance of the United States Geological Survey has been outstanding.

This study has been possible only because of the sound judgment and concern of Public Health Service officers in Dallas and in Washington. The funds for this year are adequate, but they must be increased very substantially next year if the basic data to support findings and conclusions are to be obtained. The Federal portion of the study cost will be substantial with about 40 percent of this going to the United States Geological Survey for the development of water quality and geological data in fields where the United States Geological Survey has long been recognized as competent. Contracting for this work is much more economical than recruiting the staff and developing the facilities necessary for the Public Health Service to do it.

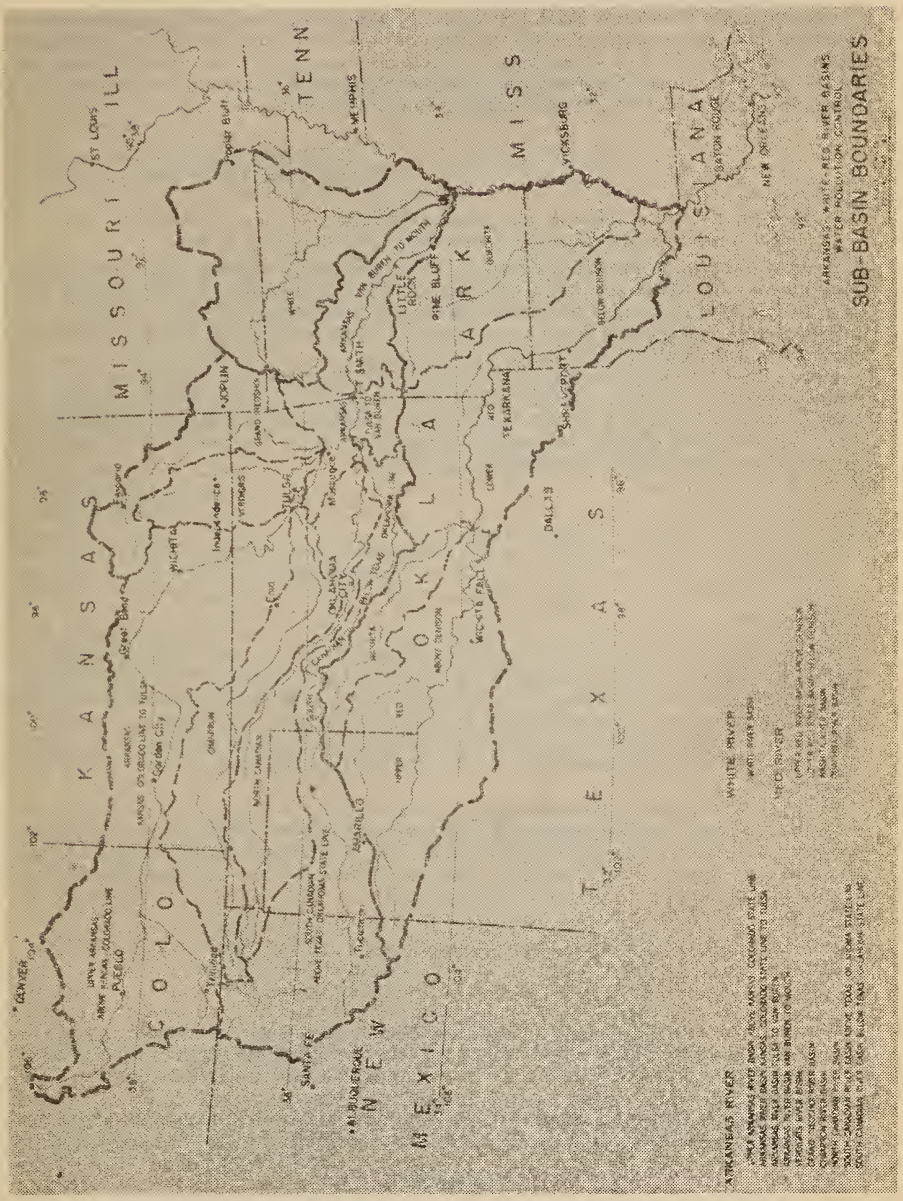
The Public Health Service expenses will be for evaluating the findings, pinpointing the pollution sources, determining the quantity of pollution from each source and developing methods for reducing it.

The project is proposed for a definite end in fiscal year 1961. If the proposed rate of study is maintained, not only will this information be obtained in time to affect the design of up to $1 billion worth of Federal water resource construction, but the study will cost less than if extended over a longer period of time at a decreased annual rate.

Within the last month the Corps of Engineers, which has followed this project closely since its inception, came to us and said, "If we had only had this information 2 years ago." They were referring to the important influence which the data now being collected would have had upon the design of multipurpose structures which have been designed within the last 2 years. Perhaps those structures which are being built today would have been designed differently, and could have provided for more beneficial use, if this water quality information had been available.

Again, let me thank you for the privilege of representing the regional office of the Public Health Service.

PLATE I


SUB-BASIN BOUNDARIES
ARKANSAS WHITE-RED RIVER BASINS
WATER POLLUTION CONTROL
MISSOURI
ILL
TENN
MISS
LOUISIANA
ARK
OKLA
KANSAS
COLO
NEW MEXICO
TEXAS
ST LOUIS
MEMPHIS
VICKSBURG
BATON ROUGE
NEW ORLEANS
LITTLE ROCK
PINE BLUFF
JOPLIN
TULSA
WICHITA
TEXARKANA
SHREVEPORT
DALLAS
WICHITA FALLS
AMARILLO
SANTA FE
ALBUQUERQUE
PUEBLO
DENVER
ARKANSAS RIVER
WHITE RIVER
RED RIVER

I want to comment, also, that the selection by Mr. Cunningham, of the Phillips and Cities Service companies, to tell of their pollution abatement efforts was not accidental. These two companies, along with some of the other major oil companies, have provided the leadership in Kansas in abating oilfield pollution, and I am sure they are providing the same kind of leadership in the other States in the Arkansas and Red River Basins.

The SURGEON GENERAL. Thank you, Mr. Metzler, for a very fine report on your study of the Arkansas-Red River which has been a subject discussed for many, many years and at last something is being done about it. In other words, the study has begun and certainly the results, if we can clean up the pollution of those two streams, it will be of fantastic benefits to the State.

UNITED STATES SENATE,
Washington, D. C., April 11, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Appropriations for Departments of Labor and Health, Education, and Welfare, United States Senate.

DEAR LISTER: On Monday, April 7, I transmitted to you a statement, with attachments, relative to the appropriation for the Public Health Service for activities under Public Law 660, the Water Pollution Act.

I transmit herewith a brief amendment to that statement and a newspaper clipping on the same subject.

More careful consideration and study indicate that the minimum amount which should be made available to the Public Health Service for the fiscal year 1959, is $400,000 to carry on the studies of the Arkansas and Red River systems, and that $100,000 should be made available to fully implement the research fellowship authorization under Public Law 660.

Sincerely yours,

ROB'T S. KERR.

SUPPLEMENT TO STATEMENT OF SENATOR ROBERT S. KERR BEFORE THE SUBCOMMITTEE ON HEALTH, EDUCATION, AND WELFARE APPROPRIATIONS COMMITTEE, UNITED STATES SENATE, IN SUPPORT OF INCREASING FUNDS FOR RESEARCH UNDER PUBLIC LAW 660

On the basis of additional information from Oklahoma and neighboring States which has come to my attention regarding the work which the Public Health Service must do to determine the causes and effects of pollution which is degrading the Arkansas and Red River systems and the increasing urgency of instituting corrective measures because of the economic situation, it is urged that an additional $400,000 be made available to the Public Health Service to expedite this project.

In view of the severe shortage and growing need for highly trained scientists to preserve and restore the quality of our waters together with the fact that the research fellowship authorization in Public Law 660 has never been implemented, I would also urge that $100,000 be made available for the full implementation of this authorization.

[Oklahoma City Times, April 8, 1958]

QUIZ SEEN ON WATER POLLUTION

Waterworks officials in both Oklahoma City and Dallas are rooting from the sidelines in behalf of a Federal money measure which could pour a half-million dollars into the study of water-pollution control at Lake Texoma and on the Red River.

The money measure is scheduled for Senate committee study in Washington when the Easter congressional recess ends next weekend.

INCLUDED IN BILL

It is included in a $3 billion Health, Education, and Welfare Department appropriation bill of which a total of $51,600,000 would be earmarked for water supply and pollution control activities. Of this amount, $45 million is for grants to the States to help finance waste treatment works, and the balance is for water quality studies.

Morrison B. Cunningham, Oklahoma City, explained "our objective in this effort is to upgrade the water in Lake Texoma on the Red River. Our work has led us to believe that we can so improve the waters of Texoma that industry, agriculture, and domestic users will be able to utilize it."

POLLUTION STATUS SHOWN

Cunningham said the study would be of value to Oklahoma City in that it would show how pollution can be reduced in the Red River's tributaries, including the South Canadian.

During the extreme drought prior to 1957, the city of Dallas was forced to go to Texoma for domestic water. He said, "the quality of the water was very objectionable."

The water pollution study, first begun last year, was set up on a 5-year program at Lake Texoma, and this year would include laboratory work and investigation of specific areas of pollution.

MONEY BILL PASSED

The House has already passed the HEW appropriation bill, however there have been administration suggestions that the Government turn the work over to the States and cities involved.

J. H. Graeser, of Dallas, who appeared with Cunningham before the subcommittee, said when Dallas was forced to go to Texoma for its water, "this brought very close to home the pollution of the Red River by oilfield brines during the periods of low flow.

"Much of the manmade pollution is the result of small marginal producing oil wells which produce a barrel of salt brine for every barrel of oil.

"Because more than one State is involved in this problem, coordination and effective control seems impossible at the local level."

Cunningham estimated that $50,000 was provided in the pending measure for pollution control studies on the Arkansas-Red River Systems. He said the amount should be increased to $400,000.

LETTER FROM SENATORS HENNINGS AND SYMINGTON

Senator HILL. I have received letters from each of the Senators from Missouri, Messrs. Hennings and Symington, urging the addition of funds to permit the award of a research contract to Washington University at St. Louis to investigate organic extracts from the Missouri River. The letters will be placed in the hearings.

(The letters referred to follow:)

UNITED STATES SENATE,
COMMITTEE ON RULES AND ADMINISTRATION,
April 15, 1958.

Hon. LISTER HILL,
Chairman, Labor-H. E. W. Appropriations Committee,
Capitol, Washington, D. C.

DEAR LISTER: I wish to urge that the appropriation for research authorized in section 4 of the Water Pollution Control Act be increased to provide the necessary funds to carry out this program adequately. I understand that applications well in excess of $1 million have been approved by the Public Health Service, yet the budget request for this program amounts only to $159,000.

Included in the research projects approved by the Division of Research Grants of the National Institutes of Health is the application by the Washington University at St. Louis to investigate organic extracts from the Missouri River. The results of the research program to be undertaken by Washington University will be beneficial to people residing all over the United States as well as those using water from the Missouri River.

I, therefore, hope your committee will see fit to provide the necessary funds to carry on this urgently needed work.

With kindest regards, I am

Sincerely yours,

THOMAS C. HENNINGS, Jr.,
United States Senator.

UNITED STATES SENATE,
COMMITTEE ON ARMED SERVICES,
April 15, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Departments of Labor and Health, Education, and Welfare and Related Agencies of the Senate Appropriations Committee, United States Senate, Washington, D. C.

DEAR MR. CHAIRMAN: Many of the Nation's cities and towns are faced with growing shortages of fresh water, brought on, in part at least, by the dumping of sewage into our streams.

In Missouri, where this problem is of growing concern, the Missouri River monitoring group has requested Washington University of St. Louis to undertake a program of basic research on organic extracts from the waters of the Missouri River.

The purpose of this study is to (1) characterize organic extracts and determine their biochemical behavior, (2) determine chemical structure and origin of chemical groupings responsible for present taste and odor problems, and (3) provide basic information which will be useful in evaluating the public health significance of these organic extracts.

Results of this study will be of value nationally, as well as on a State and local basis, therefore, the university has applied to the National Institutes of Health for a research grant to conduct the study. The university application, K 32, has been approved by the National Advisory Health Council.

The sum needed to complete the 3-year investigation is $72,720. We are advised that $25,022 could be economically spent during the first year.

In view of the scientific importance of these studies, I respectfully urge that the Health, Education, and Welfare appropriations for fiscal year 1959 include the funds needed to get this project underway.

Sincerely,

STUART SYMINGTON.

Senator HILL. The committee will now stand in recess until 10 o'clock in the morning.

(Whereupon, at 12:40 p. m., Tuesday, April 15, 1958, the hearing was recessed until 10 a. m., Wednesday, April 16, 1958.)

LABOR—HEALTH, EDUCATION, AND WELFARE APPROPRIATIONS, 1959

WEDNESDAY, APRIL 16, 1958

United States Senate,
Subcommittee of the Committee on Appropriations,
Washington, D. C.

The subcommittee met at 10 a. m., pursuant to recess, in room F–82, the Capitol, Hon. Lister Hill (chairman of the subcommittee) presiding.

Present: Senators Hill, Hayden, Pastore, and Dworshak.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Public Health Service

STATEMENT OF DR. JACK C. HALDEMAN, DEPUTY CHIEF, DIVISION OF HOSPITALS AND MEDICAL FACILITIES, ACCOMPANIED BY DR. JAMES V. LOWRY, ACTING CHIEF, BUREAU OF MEDICAL SERVICES; DR. LEROY E. BURNEY, SURGEON GENERAL; ROY L. HARLOW, CHIEF FINANCE OFFICER; AND JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

Grants for Hospital Construction

[Grants for hospital construction:] For payments under parts C and G, title VI, of the Act, as amended, $121,200,000, of which $99,000,000 shall be for payments for hospitals and related facilities pursuant to part C, $1,200,000 shall be for the purposes authorized in section 636 of the Act, and $21,000,000 shall be for payments for facilities pursuant to part G, as follows: $6,500,000 for diagnostic or treatment centers, $6,500,000 for hospitals for the chronically ill and impaired, $4,000,000 for rehabilitation facilities, and $4,000,000 for nursing homes: *Provided*, That allotments under such parts C and G to the several States for the current fiscal year shall be made on the basis of amounts equal to the limitations specified herein.

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate	$121, 200, 000	$121, 200, 000	$121, 200, 000
Additions: Unobligated balance brought forward	86, 082, 937	79, 050, 000	79, 050, 000
Deductions: Unobligated balance carried forward	79, 050, 000	50, 000, 000	50, 000, 000
Total obligations	128, 232, 937	150, 250, 000	150, 250, 000

Allocations by activities

	1958 appropriation	1959 budget estimate	1959 House allowance
1. Construction of hospitals, etc., under part C of the act	$99,000,000	$99,000,000	$99,000,000
2. Construction of medical facilities under part G of the act:			
(a) Hospitals for the chronically ill and impaired	6,500,000	6,500,000	6,500,000
(b) Diagnostic and treatment centers	6,500,000	6,500,000	6,500,000
(c) Rehabilitation facilities	4,000,000	4,000,000	4,000,000
(d) Nursing homes	4,000,000	4,000,000	4,000,000
3. Hospitals and medical facilities research activities	1,200,000	1,200,000	1,200,000
Total allocations	121,200,000	121,200,000	121,200,000

Obligations by objects

	1958 appropriation	1959 budget estimate	1959 House allowance
Total number of permanent positions	11	11	11
Average number of all employees	9	11	11
Number of employees at end of year	11	11	11
01 Personal services	$68,020	$83,130	$83,130
02 Travel	27,400	21,600	21,600
03 Transportation of things	25	25	25
06 Printing and reproduction	1,000	1,000	1,000
07 Other contractual services	8,295	4,415	4,415
Services performed by other agencies	3,000	0	0
08 Supplies and materials	550	550	550
09 Equipment	4,000	550	550
11 Grants, subsidies, and contributions	128,120,302	150,138,350	150,138,350
15 Taxes and assessments	345	380	380
Total obligations	128,232,937	150,250,000	150,250,000

Tentative allotments to States and Territories for construction of hospital and medical facilities for fiscal year ending June 30, 1959

State or Territory	Total allotment	Allotment under pt. C, hospitals	Allotment under pt. G, medical facilities				
			Total under pt. G	Diagnostic or treatment facilities	Chronic-disease facilities	Rehabilitation facilities	Nursing homes
Total	$120,000,000	$99,000,000	$21,000,000	$6,500,000	$6,500,000	$4,000,000	$4,000,000
Alabama	3,779,004	3,253,840	525,164	154,872	154,872	107,710	107,710
Arizona	1,057,921	757,921	300,000	100,000	100,000	50,000	50,000
Arkansas	2,294,766	1,964,694	330,072	100,000	100,000	65,036	65,036
California	5,170,584	4,452,032	718,552	211,902	211,902	147,374	147,374
Colorado	1,272,088	972,088	300,000	100,000	100,000	50,000	50,000
Connecticut	837,736	537,736	300,000	100,000	100,000	50,000	50,000
Delaware	500,000	200,000	300,000	100,000	100,000	50,000	50,000
District of Columbia	550,569	250,569	300,000	100,000	100,000	50,000	50,000
Florida	3,174,069	2,732,973	441,096	130,080	130,080	90,468	90,468
Georgia	3,970,109	3,418,387	551,722	162,704	162,704	113,157	113,157
Idaho	785,057	485,057	300,000	100,000	100,000	50,000	50,000
Illinois	3,634,988	3,129,838	505,150	148,969	148,969	103,606	103,606
Indiana	2,614,966	2,251,566	363,400	107,167	107,167	74,533	74,533
Iowa	2,186,641	1,863,283	323,358	100,000	100,000	61,679	61,679
Kansas	1,636,892	1,336,892	300,000	100,000	100,000	50,000	50,000
Kentucky	3,317,055	2,856,087	460,968	135,940	135,940	94,544	94,544
Louisiana	3,104,984	2,673,488	431,496	127,249	127,249	88,499	88,499
Maine	991,333	691,333	300,000	100,000	100,000	50,000	50,000
Maryland	1,568,627	1,268,627	300,000	100,000	100,000	50,000	50,000
Massachusetts	2,389,640	2,053,676	335,964	100,000	100,000	67,982	67,982
Michigan	3,451,105	2,971,507	479,598	141,434	141,434	98,365	98,365
Minnesota	2,405,522	2,068,572	336,950	100,000	100,000	68,475	68,475
Mississippi	3,068,437	2,642,019	426,418	125,751	125,751	87,458	87,458
Missouri	2,822,912	2,430,614	392,298	115,689	115,689	80,460	80,460
Montana	662,831	362,831	300,000	100,000	100,000	50,000	50,000
Nebraska	1,275,639	975,639	300,000	100,000	100,000	50,000	50,000
Nevada	500,000	200,000	300,000	100,000	100,000	50,000	50,000
New Hampshire	663,719	363,719	300,000	100,000	100,000	50,000	50,000
New Jersey	2,004,892	1,692,818	312,074	100,000	100,000	56,037	56,037
New Mexico	961,541	661,541	300,000	100,000	100,000	50,000	50,000
New York	6,085,774	5,240,040	845,734	249,408	249,408	173,459	173,459
North Carolina	5,028,859	4,330,003	698,856	206,094	206,094	143,334	143,334
North Dakota	882,523	582,523	300,000	100,000	100,000	50,000	50,000
Ohio	4,464,825	3,844,353	620,472	182,978	182,978	127,258	127,258
Oklahoma	2,027,715	1,714,225	313,490	100,000	100,000	56,745	56,745
Oregon	1,248,807	948,807	300,000	100,000	100,000	50,000	50,000
Pennsylvania	6,386,409	5,498,895	887,514	261,729	261,729	182,028	182,028
Rhode Island	707,716	407,716	300,000	100,000	100,000	50,000	50,000
South Carolina	2,857,971	2,460,801	397,170	117,126	117,126	81,459	81,459
South Dakota	913,498	613,498	300,000	100,000	100,000	50,000	50,000
Tennessee	3,763,653	3,240,621	523,032	154,243	154,243	107,273	107,273
Texas	7,195,165	6,195,259	999,906	294,874	294,874	205,079	205,079
Utah	906,100	606,100	300,000	100,000	100,000	50,000	50,000
Vermont	583,123	283,123	300,000	100,000	100,000	50,000	50,000
Virginia	3,228,606	2,779,930	448,676	132,315	132,315	92,023	92,023
Washington	1,494,936	1,194,936	300,000	100,000	100,000	50,000	50,000
West Virginia	2,113,437	1,794,623	318,814	100,000	100,000	59,407	59,407
Wisconsin	2,543,358	2,189,910	353,448	104,232	104,232	72,492	72,492
Wyoming	500,000	200,000	300,000	100,000	100,000	50,000	50,000
Alaska	500,000	200,000	300,000	100,000	100,000	50,000	50,000
Guam	82,833	71,323	11,510	3,394	3,394	2,361	2,361
Hawaii	613,803	313,803	300,000	100,000	100,000	50,000	50,000
Puerto Rico	3,183,579	2,741,161	442,418	130,470	130,470	90,739	90,739
Virgin Islands	33,683	29,003	4,680	1,380	1,380	960	960

NOTE.—Basis of allotments, per statutory formula: (*a*) Total population, as estimated by Bureau of the Census: United States, July 1, 1957 (series P-25, No. 168, dated Dec. 9, 1957); Territories, July 1 1956 (series P-25, No. 167, dated Nov. 15, 1957), except Virgin Islands, July 1, 1955 (series P-25, No. 145, dated Oct. 19, 1956); and Guam, 1950 census. (*b*) Allotment percentages for the fiscal years 1958 and 1959, as promulgated in the Federal Register, Sept. 5, 1956.

STATEMENT OF THE CHAIRMAN

Senator HILL. The subcommittee will kindly come to order.

Good morning, Dr. Haldeman, we are delighted to see you.

We have with us Dr. Jack C. Haldeman, Deputy Chief, Division of Hospitals and Medical Facilities, appearing before us on the sub-

ject of grants for hospital construction. Doctor, we will be delighted to have you proceed in your own way.

Dr. HALDEMAN. Thank you, Mr. Chairman. If you would like, I will submit my statement for the record and summarize it.

PREPARED STATEMENT

Senator HILL. All right. We will put your full statement in the record and then you can give us a brief summarization.

(The statement referred to follows:)

STATEMENT BY DEPUTY CHIEF, DIVISION OF HOSPITAL AND MEDICAL FACILITIES

PURPOSE

Mr. Chairman and members of the committee, the purpose of the hospital and medical facilities survey and construction program is to assist the States in providing adequate hospital, clinical, and similar services to the people of this country. This is accomplished in two steps, namely, the development of a basic plan for meeting the hospital and medical facilities needs of the State, and the construction of such facilities in the order of priority.

The total request for hospital and medical facilities construction and for research activities in 1959 is $121,200,000, the same amount as was appropriated for fiscal year 1958. This amount was approved by the House. Of the amount requested, $99 million will be used for the construction of hospitals and public health centers, $21 million for the construction of nursing homes, diagnostic or treatment centers, rehabilitation facilities, and chronic disease hospitals, and $1,200,000 for research activities.

The $99 million requested for construction of hospitals and public health centers will enable the States to initiate 259 hospital projects involving 14,920 beds and 74 public health centers. The requested $21 million for construction of other medical facilities will permit the States to initiate 63 nursing homes and chronic disease hospitals involving 3,082 beds, 52 diagnostic or treatment centers, and 24 rehabilitation facilities. This projection of projects and beds which may be constructed with the grant funds requested for 1959 is based on the assumption that the States will follow the same pattern of project programing in 1959 as was established during the years 1956 and 1957.

ACCOMPLISHMENTS

As of December 31, 1957, $957 million in Federal funds has been committed to 3,725 projects in the States and Territories. This, in turn, has been matched by over $2 billion of State and local funds. Nearly 2,500 of the projects to which funds have been allotted have been completed, are in operation, and are serving their communities. Over 900 projects are under construction and the remaining projects are in the preconstruction stages. Completion of these projects will add 161,200 hospital and nursing home beds and 686 new public health centers, and will result in the construction, expansion, or remodeling of 153 diagnostic or treatment centers and 66 rehabilitation facilities.

Substantial progress has been made in the construction of general hospital beds and facilities since the program was activated over 10 years ago. In 1948 only 59 percent of the general hospital beds needed in this country were in existence, whereas 75 percent of the needed beds exist today. The same substantial progress has not been made in the construction of other health facilities, particularly facilities providing long-term care. For the most part, this results from the fact that States have, up to this time, placed primary emphasis in their Hill-Burton programs on the need for general hospital facilities and beds.

In addition to the more tangible measures of accomplishment, the Hill-Burton program has made many other significant contributions. First, the scattered and varied efforts in planning of medical facilities were, upon activation of the Hill-Burton program, replaced by systematic surveys and inventories of existing facilities and orderly long-range planning of needed facilities in each of the States and Territories. Secondly, the increased availability of modern facilities in rural areas has had a marked effect in inducing physicians

and other professional hospital personnel to practice in rural areas. Thirdly, the architectural and construction standards developed under the program have made a significant contribution in improving the physical and functional design of hospitals and medical facilities throughout the Nation. These standards have also been copied for use in many foreign countries. Fourth, the Hill-Burton program led to the adoption by States of standards of maintenance and operation for hospitals aided under the program. In addition, all States have adopted programs of licensure for nursing homes and all States, except three, have licensure programs for hospitals. As a result, there has been a general upgrading of standards of maintenance and operation required of medical facilities throughout the country.

ADDITIONAL NEED

Evidence of the need for construction of additional health facilities is readily available. Plans submitted by State agencies administering the Hill-Burton program show the need for 1,211,141 additional hospital and nursing home beds. In addition, our annual population increase alone requires approximately 36,000 additional hospital and nursing home beds each year. We also estimate that approximately 22,000 hospital beds become obsolete each year and require replacement.

State agencies continue to report a large backlog of applications, and advise us that many of these projects are far advanced in their planning and could be placed under contract within a comparatively short time.

RESEARCH ACTIVITIES

The appropriation act for fiscal year 1958 included a sum of $1,200,000 for research, experiments, and demonstrations relating to the development, utilization, and coordination of hospital services, facilities, and resources. A similar request is included in our estimate for fiscal year 1959. All of the available research funds are being utilized.

The continuance of such research and studies will provide the administrative planning, knowledge, and methodology which are necessary to apply economically, effectively, and more rapidly discoveries in clinical research to the care and treatment of patients in hospitals and medical facilities.

PURPOSE OF HILL-BURTON ACT

Dr. HALDEMAN. Mr. Chairman, as you know, the purpose of the Hill-Burton Act is to assist the States in providing medical facilities to the people. This is accomplished in two steps: first, the development of a basic plan for meeting the hospital and medical facilities needs of the States and, second, the construction of such facilities in the order of their priority.

GRANTS FOR HOSPITAL CONSTRUCTION

The total amount requested under the item of "Grants for hospital construction" is $121,200,000. Of this amount, $99 million will be used for the construction of hospitals and public health centers; $21 million for the construction of nursing homes, diagnostic or treatment centers, rehabilitation facilities, and chronic disease hospitals; and the remaining $1,200,000 for research activities. This is the same amount that is contained in our 1958 appropriation, and is also the same amount that was contained in the House appropriations bill for 1959, which was just recently passed.

The $99 million requested under the part C program will enable the States to initiate about 260 hospital projects, involving approximately 15,000 beds and 75 public health centers.

The requested $21 million under the part G program, will permit the initiation of approximately 140 projects under this part of the

program. This projection is based on the assumption that the States will follow the same pattern of project programing in 1959 as they did in fiscal years 1956 and 1957.

Substantial progress has been made in the construction of general hospital beds in the last 10 years. In 1948, only 59 percent of the general hospital bed needs, according to the State plans, had been met, whereas today, 75 percent of these needs have been met. Similar progress, however, has not been made in other categories, particularly the categories for long-term care facilities.

For the most part, this results from the fact that the States have been giving primary emphasis to the general hospital category. In addition, population increases and the needs for major renovation of existing facilities and replacement of obsolete facilities have tended to offset efforts to build up the country's hospital plants to a more adequate level.

ACCOMPLISHMENTS UNDER HILL-BURTON PROGRAM

The Hill-Burton program, however, has made a number of other significant contributions which are more qualitative in nature.

First, the rather scattered, meager efforts in planning hospital facilities prior to the Hill-Burton program have been replaced by a systematic survey and inventory of existing facilities and the development of statewide plans.

Secondly, the increase in the number of well-equipped hospitals in rural areas has attracted a large number of physicians to such areas which in turn has resulted in an upgrading of medical practice in these areas.

Third, the architectural and construction standards developed under the program have made a significant contribution in improving the physical and functional design of hospitals. These standards are used in the construction of hospitals outside of the program and are even copied in foreign countries.

Fourth, the program requirement that hospitals built under the act come under State standards of maintenance and operation has resulted in practically all States developing statewide standards for maintenance and operation. Also, these licensure laws have tended to upgrade the standards of maintenance and operation of our hospitals.

NEEDS REMAINING

Plans submitted by our State agencies currently show a need for about 1,200,000 additional hospital and nursing-home beds. Another 36,000 hospital beds are needed each year for simply taking care of population increases. We also estimate that about 22,000 hospital beds are needed annually to take care of obsolescence of existing facilities.

The appropriation also has $1,200,000 for research. Hospitals in this country spend approximately $6 billion annually for providing patient care. There are some 1,400,000 persons employed in the hospital industry. This is compared to about 650,000 people in the steel industry or some 600,000 to 800,000 in the automobile industry. Yet, by and large, in the hospital field, there has been relatively little research and experimentation in developing better methods for providing hospital services. We feel this is an extremely important activity.

SALARIES AND EXPENSES, HOSPITAL CONSTRUCTION SERVICES

STATEMENTS OF DR. JACK C. HALDEMAN, CHIEF, DIVISION OF HOSPITALS AND MEDICAL FACILITIES, ACCOMPANIED BY JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

SALARIES AND EXPENSES, HOSPITAL CONSTRUCTION SERVICES

[Salaries and expenses, hospital construction services:] For salaries and expenses incident to carrying out title VI of the Act, as amended, [$1,450,000] *$1,320,000.*

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate	$1,450,000	$1,320,000	$1,300,000
Total obligations	1,450,000	1,320,000	1,300,000

Obligations by activities

Description	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Operations and technical services	152	$1,331,000	139	$1,209,500	137	$1,189,500
2. Administration	20	119,000	18	110,500	18	110,500
Total obligations	172	1,450,000	157	1,320,000	155	1,300,000

Obligations by objects

	1958 appropriation	1959 budget estimate	1959 House allowance
Total number of permanent positions	172	157	155
Full-time equivalent of all other positions	1	1	1
Average number of all employees	168	152	150
Number of employees at end of year	172	157	155
01 Personal services	$1,210,000	$1,109,200	$1,089,770
02 Travel	101,000	90,000	90,000
03 Transportation of things	3,800	3,800	3,800
04 Communication services	3,000	3,000	3,000
06 Printing and reproduction	22,100	18,000	18,000
07 Other contractual services	20,800	18,000	18,000
08 Supplies and materials	10,400	8,000	7,720
09 Equipment	15,000	10,500	10,500
11 Grants, subsidies, and contributions (contribution to retirement fund)	60,700	57,500	57,210
15 Taxes and assessments	3,200	2,000	2,000
Total obligations	1,450,000	1,320,000	1,300,000

Summary of changes

	Positions	Amount
1958 actual appropriation	172	$1,450,000
1959 appropriation request	157	1,320,000
Net change requested	−15	−130,000

	1959 budget estimate		1959 House allowance	
	Pos.	Amount	Pos.	Amount
Decreases:				
For program items:				
For hospital construction program items:				
Personal services	17	$120,230	17	$120,230
Travel and per diem	------	11,000	------	11,000
Printing and reproduction	------	4,100	------	4,100
Other contractual services	------	2,800	------	2,800
Supplies and materials	------	2,680	------	2,680
Equipment	------	4,500	------	4,500
Contribution to retirement fund	------	5,300	------	5,300
Taxes and assessments	------	1,200	------	1,200
Subtotal	17	151,810	17	151,810
Increases:				
For mandatory items:				
Retirement contributions annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958, base positions)	------	1,810	------	1,810
For Civil Defense activities:				
Personal services	2	19,430	------	----------
Supplies and materials	------	280	------	----------
Retirement contribution	------	290	------	----------
Total change requested	−15	−130,000	−17	−150,000

EFFECT OF HOUSE ACTION

The House disallowed $20,000 for civil-defense activities which we are no longer requesting be included in this appropriation. It is our understanding that the Administrator of Civil Defense will request the Independent Offices Subcommittee to include funds in the Federal Civil Defense appropriation for allocation to the agencies to whom certain civil-defense functions have been delegated.

PREPARED STATEMENT

Dr. HALDEMAN. I would like to refer just briefly to our request for the item "Salaries and expenses."

Senator HILL. At this point your full statement will be placed in the record.

(The statement referred to follows:)

STATEMENT BY DEPUTY CHIEF, DIVISION OF HOSPITAL AND MEDICAL FACILITIES

APPROPRIATION ESTIMATE

Mr. Chairman and members of the committee, a request in the amount of $1,320,000 is submitted under this appropriation for fiscal year 1959. Of this amount, $1,300,000 will be used to cover the costs of the technical, operational, research, and administrative aspects of the hospital and medical facilities survey and construction program and $20,000 for certain civil-defense activities.

The amount requested for the operation of the Hill-Burton program represents a reduction of $150,000 under the $1,450,000 appropriated for fiscal year 1958.

The request for grant funds was increased from $75 million to $121,200,000 after the budget was submitted. No similar increase was made, however, in the request for salary and expense funds. The Budget Bureau recognizes the relationship between the size of the grant program and the need for administrative funds and will as a result of the increase in the grant appropriation from $75

million to $121,200,000 submit a supplemental within the next few weeks, along with the usual windup supplemental message.

SCOPE OF PROGRAM

Three major changes in the hospital and medical facilities survey and construction legislation have taken place since its enactment in 1946. First, the authorization for the construction of hospitals, public health centers, and related facilities was increased to $150 million per year; secondly, an annual authorization of $60 million was established for the construction of chronic disease hospitals, diagnostic or treatment centers, rehabilitation facilities, and nursing homes; and thirdly, the Surgeon General was authorized to conduct research, experiments, and demonstrations relating to the effective development and utilization of hospital services, facilities, and resources.

EXPLANATION OF NEED

In addition to providing a technical guidance and consultation to States regarding the development of State plans, annual construction programs, and standards of design and construction, staff must also be available to review and approve project applications including detailed architectural plans and specifications, inspect projects and certify Federal payments, and maintain surveillance over bid and award procedures and the payment of minimum wage rates. In addition, the research program must be administered which currently consists of 47 projects.

The operation of these programs requires a large number of specialized and highly technical skills related to the planning, design and construction of all types of hospital and medical facilities. For the most part these employees are in the professions of medicine, nursing, hospital administration, architecture, engineering, and equipment consultation. Employees in these professional categories are minimal in number, have been recruited gradually over a long period of years, and have become highly skilled in their respective specialties.

The stability of this basic professional and technical staff is essential if the Federal Government is to maintain its role of national leadership in the planning, design, and construction of hospitals and other medical facilities.

EFFECT OF HOUSE ACTION

The House disallowed $20,000 for civil defense activities which we are no longer requesting be included in this appropriation. It is our understanding that the Administrator of Civil Defense will request the independent offices subcommittee to include funds in the Federal civil defense appropriation for allocation to the agencies to whom certain civil defense functions have been delegated.

HOUSE ACTION

Dr. HALDEMAN. The request before you for the item, "Salaries and expenses" is $1,320,000. The House recommendation was $1,300,000. The administration request for grant funds was increased from $75 million to $121,200,000, and this is the figure that was passed by the House. No similar request for an increase in the "Salaries and expenses" item was made at that time. However, we realize that there is a relationship between the size of the grant program and the need for additional funds in the item, "Salaries and expenses," and we do anticipate that there will be a supplemental request quite shortly.

Mr. KELLY. There will be a request made, Mr. Chairman, for an additional $150,000 in order to bring it up to the level of this year, commensurate with the same level of the grant.

REQUEST FOR ADDITIONAL FUNDS

Senator HILL. When do you expect that request to come?

Mr. KELLY. I am not quite certain whether or not that is going to be submitted in time for consideration by this committee, or included in the supplemental request, but it is agreed that the $150,000 supplemental will be submitted.

Senator HILL. I realize you cannot speak for the budget, but what I would really like to know is: If the budget has made up its mind to send this supplemental in why does it not do so, so it can go in in this bill along with the other funds?

Mr. KELLY. I think it was endeavoring to incorporate this together with other requests, in the hope that it would not have to come up as a separate consideration. I believe that is the difficulty.

Senator HILL. Of course, that budget estimate for "Salaries and expenses" was fixed at the time that the budget had sent an estimate here for only $75 million for construction.

Mr. KELLY. That is correct.

Senator HILL. Then the budget afterward modified that estimate by sending in another estimate of $121,200,000, which is the same amount of money which you had for this fiscal year; is that right?

Mr. KELLY. That is correct.

Senator HILL. And, naturally, as you increase your construction funds you have more administrative and operational costs; is that not true?

Mr. KELLY. Yes, sir; that is true.

Senator HILL. Therefore, your "Salaries and expenses" item should be in line with your construction item.

Dr. HALDEMAN. That is correct.

Senator HILL. All right, Dr. Haldeman—continue.

Dr. HALDEMAN. I think that is all. Mr. Chairman, I will be glad to attempt to answer any questions you may have.

Senator HILL. Well, Doctor, we do thank you for your statment, and I want to ask you this: Is there not a great need now for hospital beds throughout the country?

UNMET CONSTRUCTION NEEDS

Dr. HALDEMAN. Yes. There is still a great unmet need for the construction of hospital facilities throughout the counrty. We have made progress, and as I mentioned, particularly in the general hospital category. However, from the standpoint of the overall picture, there is still a real need for general hospitals, mental hospitals, and a growing need for other long-term-care facilities, and nursing homes. As I also indicated, because we have a rapidly increasing population and a growing obsolescence of our existing plants, the overall need for hospital beds has remained about the same in the last few years. Through new construction, we just about keep pace with the growing population and the obsolescence of our existing plants.

Senator PASTORE. Is that predicated upon statistics or applications made?

Dr. HALDEMAN. Well, there are several methods of determining what hospital needs are. All of the methods have certain deficiencies, but you can draw some general conclusions.

Senator PASTORE. To be more specific, Doctor, how many applications do you have existing now that are not being processed, only because of lack of funds?

SURVEY OF STATE AGENCIES

Dr. HALDEMAN. Well, at the request of Senator Hill, we have made a survey of the State agencies. They report that, if unlimited Federal funds were available in 1959 and 1960, a total of 1,524 hospital projects using $794 million of Federal funds and 695 diagnostic or treatment centers and other projects under part G of the program, utilizing $149 million could be approved. The estimated total cost of constructing all these projects is $2,300 million, with an estimated total of $943 million from Federal funds. Therefore, there is a very substantial backlog of applicants that could qualify under the program and are requesting assistance.

Senator HILL. Then your chart shows, does it not—and I have a copy here before me, that 2,219 projects, of which your State health agencies have advised you, could, and would, go forward if you had the Federal funds.

Dr. HALDEMAN. That is correct, sir.

Senator HILL. And that the total cost of these 2,219 projects would be $2,330,101,000; is that correct?

Dr. HALDEMAN. Correct.

Senator HILL. Of which the Federal share would be, as you stated $943,954,000; is that correct?

Dr. HALDEMAN. That is correct.

STATEMENT OF AMERICAN HOSPITAL ASSOCIATION

Senator HILL. Doctor, in that connection, on the number of beds, I have here a letter dated April 11, 1958, from the American Hospital Association, signed by Mr. Kenneth Williamson, associate director, American Hospital Association, in which, among other things, he makes this statement:

> We note that in its testimony before the House committee, the Public Health Service stated that the total national need for hospital beds of all kinds stands at over 1.9 million, and is fast approaching the 2 million mark. Their testimony also cited that the Nation currently has about 1.1 million acceptable beds, indicating a remaining total shortage in all classes of beds of about 800,000. Progress is being made in reducing this shortage. When this program started, the original surveys reflected the existence of about 900,000 acceptable beds. Half of this gain is due to the Hill-Burton program.

Is that correct?

Dr. HALDEMAN. That is correct.

Senator HILL. That is correct. In other words, you have, with your population rapidly increasing, due to new births and due to the fact we have very definitely lengthened the life span in more recent years, a need now for beds of all kinds in the amount of some 1,900,000 and we are fast approaching the 2 million mark.

Dr. HALDEMAN. That is correct.

Senator HILL. Is that not true?

Dr. HALDEMAN. Yes.

Senator HILL. And we have some 2,219 projects through State agencies that handle these programs under the law, which they advise

you would go forward if there were the Federal funds for Federal participation; is that not the picture?

RELATING CONSTRUCTION TO RECESSION

Senator PASTORE. My concern is precisely this: I was speaking about recession, about what we should do about overcoming this recession and recognizing this tremendous need for hospital beds, and the thing that I am questioning here at this moment—not with any sense of criticism, but merely out of curiosity—is: Are we asking for enough money under this Hill-Burton Act, recognizing the fact that here we are, and we ought to be in for more public works, since I do not know where you could better invest your money? Here is a cooperative program where the States make a substantial contribution. Now, why should this not be a place where we would be asking for more money, rather than it being predicated upon past experience, but rather, to project ourselves into the future, to do something for the well-being of our population, and at the same time rendering more jobs and having this partnership between the Federal Government and the States? Is there any hesitancy here now to increase the amount or are we predicating this upon past demands, or are we meeting it in a systematic way, realizing what the present situation happens to be?

Mr. KELLY. It seems to me, Senator, that the best way to answer that question is to say that the witnesses before you are not really able to answer this because it is an overall policy matter as to whether or not large-scale public works will be requested by the administration at this time. In connection with planning for large-scale public works, in the event it becomes desirable to make such requests, we have developed data in connection with the hospital construction program for consideration in connection with any such program, but this is beyond our Department, the determination as to whether or not any such programs will be advocated by the administration. We are not capable of speaking to this point with you.

Senator PASTORE. I realize that, but will you answer this question:

If the administration should decide, in consonance with their desire to create more public works, and if we put more money under the Hill-Burton Act, would we not be spending our money very wisely?

Mr. KELLY. I believe the answer to that is "Yes." We have put together information on that point.

Senator HILL. I am glad Senator Pastore asked that question. I think we ought to make clear in the record that in the face of a need for some 2 million hospital beds of all kinds, the original budget estimate was for only $75 million.

A revised estimate for a total of $121,200,000 has been submitted, to finance, Dr. Haldeman has testified, the addition of 15,000 beds, 75 public health centers, and 140 projects under part G. But the doctor also testified that there is needed annually 36,000 additional beds to take care of increased population, and another 22,000 annually to take care of obsolescence. The beds contemplated in the budget estimate before us would take care of hardly one-fourth of what is required to maintain our position, and these together with the beds added

by construction outside of the Hill-Burton program still leave an annual deficit of some 20,000 beds.

The act itself authorizes, Senator, $210 million.

Senator PASTORE. Yes.

Senator HILL. In connection with that very appropriate observation which you made, I call particular attention to the fact that the total cost of the 2,219 projects that the State agencies have advised us as to going forward with if Federal funds are available, would be as I said, $2,330,101,000. The Federal share would be $943 million. In other words, your States or local communities would be paying about 1½ times what the cost is to the Federal Government. The States together with the local communities put up approximately 60 percent of the total costs, while the Federal Government contributes approximately 40 percent. I do not know of any other proposal here for any kind of public works that is comparable at all to this. In practically all of the other proposals you have, the Federal Government is just about putting up the whole cost.

Senator PASTORE. I do not want to make it an issue, and get into it now, but it strikes me that even without the institution of a new policy on he part of the administration, if we brought this up to total strength under the authorization, we would be acting wisely, even as of now.

Senator HILL. I have always thought the Senator was one of the wisest men I have ever known and he certainly has demonstrated that this morning.

Dr. Haldeman, did you wish to make an observation?

Dr. HALDEMAN. I merely wanted to comment on the fact that if it were decided that the Hill-Burton program should be expanded, as an antirecession measure, I think there are 2 or 3 factors that make the program an ideal one for that purpose.

First, as you know, we have an established Federal-State relations machinery which is in operation. We have a priority system for selecting projects which assures that the projects that are selected will be those which will do the most good.

Senator HILL. In other words, Doctor, if I might interrupt, this act was written in such a way as to get away from anything like a grab-bag proposition, so the one that got here with the greatest pressure and with the longest arm might get the money, but rather, it was to try to meet the needs in the order of the priority of those needs; is that correct?

Dr. HALDEMAN. That is correct.

Senator HILL. And I think it has proven out that way; has it not?

Dr. HALDEMAN. That is right, sir.

Senator HILL. You may proceed.

Dr. HALDEMAN. I have completed my statement.

QUESTION OF PRIORITIES

Senator HILL. I might read again from the American Hospital Association letter of April 11, which I shall put in the record in full, following your remarks, Doctor:

It is our understanding that the Public Health Service is convinced that additional funds under part C could be put to work very rapidly, and that

this is true not only of new construction but also of a substantial volume of renovation projects.

Of course, we know the priorities go to the construction projects; is that right?

Dr. HALDEMAN. Under the existing regulations, a higher priority is given to beds added than is given to major remodeling, although I should say in some sections of the country, the need for remodeling is becoming substantial.

Senator HILL. That is correct, sir.

Senator Hayden, do you have any questions?

Senator HAYDEN. No.

Senator HILL. Do you agree with the wisdom expressed here this morning?

Senator HAYDEN. I do.

Senator PASTORE. May I have the chairman's indulgence for just a moment?

Senator HILL. Certainly.

Senator PASTORE. I have to preside at a meeting of the Interstate and Foreign Commerce Committee at 10:30 and I was just interested in two items. I do not want to anticipate anything here, but I was wondering that if these items come up later in the morning that I could be advised to come down or else we could mention them now? They are under title I and title II of Public Law 911.

It has to do with the training of professional and public health workers, and advanced training of professional nurses.

Senator HILL. Certainly. Is there anything else you want to add here, Doctor?

Dr. HALDEMAN. No, sir.

Senator HILL. Doctor, there are no further questions, and we appreciate your appearance and I shall insert in the record at this point this table which we have alluded to, the letter of the American Hospital Association, and also a communication here addressed to Senator Thye. He was terribly disappointed that he could not be here this morning, but he had another meeting and it was necessary to be there.

(The material referred to follows:)

Summary of anticipated construction of hospitals and other medical facilities (under title VI of the Public Health Service Act) if there were no limitation on Federal assistance, United States and Territories—For fiscal years 1959 and 1960

State and program year	Number of projects			Beds or units added, by type of project									Estimated cost (thousands)					
				Part C					Part G				Total program		Part C		Part G	
	Total	Part C	Part G	General hospital	Mental hospital	Chronic hospital	T. B. hospital	Health center (units)	Diagnosis or treatment (units)	Chronic hospital	Rehabilitation facilities (units)	Nursing homes	Total cost	Federal share	Total cost	Federal share	Total cost	Federal share
Total	2, 219	1, 524	695	73, 747	14, 941	1, 794	562	229	142	5, 153	92	17, 026	$2, 330, 101	$943, 954	$1, 970, 111	$794, 327	$359, 990	$149, 627
1959	1, 285	889	396	42, 611	12, 287	1, 409	462	115	93	2, 546	57	9, 014	1, 346, 342	500, 606	1, 152, 134	423, 464	194, 208	77, 142
1960	934	635	299	31, 136	2, 654	385	100	114	49	2, 607	35	8, 012	983, 759	443, 348	817, 977	370, 863	165, 782	72, 485
Alabama	57	40	17	1, 397	400		200	7	3	133	1	261	34, 536	23, 024	29, 106	19, 404	5, 430	3, 620
1959	30	22	8	509			100	4	1	108	1	65	11, 661	7, 774	9, 954	6, 636	1, 707	1, 138
1960	27	18	9	888	400		100	3	2	25		196	22, 875	15, 250	19, 152	12, 768	3, 723	2, 482
Arizona	13	8	5	419				2	3			52	9, 954	2, 351	6, 304	2, 146	3, 650	205
1959	5	5		318				1					4, 874	793	4, 874	793		
1960	8	3	5	101				1	3			52	5, 080	1, 558	1, 430	1, 353	3, 650	205
Arkansas	35	20	15	830	500			2			1	490	25, 198	14, 800	19, 698	11, 134	5, 500	3, 666
1959	17	10	7	600				1			1	230	13, 199	6, 799	10, 299	4, 866	2, 900	1, 933
1960	18	10	8	230	500			1				260	11, 999	8, 001	9, 399	6, 268	2, 600	1, 733
California	167	110	57	5, 721	637		50	22	16	900	15	767	139, 419	44, 357	110, 472	34, 868	28, 947	9, 489
1959	82	55	27	3, 213	353		50	6	10	235	6	259	74, 199	23, 381	61, 987	19, 512	12, 212	3, 869
1960	85	55	30	2, 508	284			16	6	665	9	508	65, 220	20, 976	48, 485	15, 356	16, 735	5, 620
Colorado	46	30	16	327	2, 500			3	4		3	302	78, 175	35, 583	68, 275	30, 720	9, 900	4, 863
1959	18	10	8	327	2, 500			2	4		2	62	35, 555	16, 245	30, 565	13, 750	4, 990	2, 495
1960	28	20	8					1			1	240	42, 620	19, 338	37, 710	16, 970	4, 910	2, 368
Connecticut	24	14	10	778	32		15		3	50	3	150	26, 743	8, 915	21, 323	7, 108	5, 420	1, 807
1959	15	11	4	636	32		15		2		2		16, 893	5, 631	14, 823	4, 941	2, 070	690
1960	9	3	6	142					1	50	1	150	9, 850	3, 284	6, 500	2, 167	3, 350	1, 117

Summary of anticipated construction of hospitals and other medical facilities (under title VI of the Public Health Service Act) if there were no limitation on Federal assistance, United States and Territories—For fiscal years 1959 and 1960—Continued

State and program year	Number of projects			Beds or units added, by type of project									Estimated cost (thousands)					
				Part C					Part G				Total program		Part C		Part G	
	Total	Part C	Part G	General hospital	Mental hospital	Chronic hospital	T. B. hospital	Health center (units)	Diagnosis or treatment (units)	Chronic hospital	Rehabilitation facilities (units)	Nursing homes	Total cost	Federal share	Total cost	Federal share	Total cost	Federal share
Delaware	8	5	3	165				1	1				$7,050	$1,450	$6,350	$1,100	$700	$350
1959	4	2	2	100				1					5,450	800	5,050	600	400	200
1960	4	3	1	65					1				1,600	650	1,300	500	300	150
D. C.	7	4	3	1,086				1		100	1	80	26,300	7,100	21,000	5,200	5,300	1,900
1959	1	1		336									8,000	1,000	8,000	1,000		
1960	6	3	3	750				1		100	1	80	18,300	6,100	13,000	4,200	5,300	1,900
Florida	80	57	23	3,441	1,029			8	10	330	4	250	78,948	31,409	71,208	27,539	7,740	3,870
1959	53	38	15	2,636	1,000			5	6	270	3	150	65,883	25,733	60,083	22,833	5,800	2,900
1960	27	19	8	805	29			3	4	60	1	100	13,065	5,676	11,125	4,706	1,940	970
Georgia	56	42	14	1,278	60				2	50	2	582	29,492	11,094	22,080	7,455	7,412	3,639
1959	31	25	6	913	60				2	20	1	300	18,970	6,852	15,770	5,252	3,200	1,600
1960	25	17	8	365						30	1	282	10,522	4,242	6,310	2,203	4,212	2,039
Idaho	25	17	8	374				2	2			575	15,475	5,865	9,625	3,090	5,850	2,775
1959	15	11	4	239				2				375	8,915	2,885	5,665	1,410	3,250	1,475
1960	10	6	4	135					2			200	6,560	2,980	3,960	1,680	2,600	1,300
Illinois	71	42	29	5,080					6	760	2	525	148,855	49,614	117,960	39,318	30,895	10,296
1959	35	20	15	2,020					3	340	1	230	59,140	19,710	46,240	15,412	12,900	4,298
1960	36	22	14	3,060					3	420	1	295	89,715	29,904	71,720	23,906	17,995	5,998
Indiana	47	31	16					1	2		4		44,272	14,757	32,830	10,943	11,442	3,814
1959	21	13	8						1		2		21,856	7,285	16,135	5,378	5,721	1,907
1960	26	18	8					1	1		2		22,416	7,472	16,695	5,565	5,721	1,907

Iowa	62	30	32	1,039	490	250			3		5	1,487	45,270	15,090	28,590	9,530	16,680	5,560
1959	28	15	13	554		250			1		1	838	22,665	7,555	14,325	4,775	8,340	2,780
1960	34	15	19	485	490				2		4	649	22,605	7,535	14,265	4,755	8,340	2,780
Kansas	22	13	9	1,025	125				1		2	210	24,745	9,424	21,070	8,179	3,675	1,245
1959	14	6	8	125	100				1		2	135	8,445	2,904	5,570	1,979	2,875	925
1960	8	7	1	900	25							75	16,300	6,520	15,500	6,200	800	320
Kentucky	80	69	11	2,309				36	3		3	400	61,430	30,715	50,330	25,165	11,100	5,550
1959	38	34	4	1,319				18	1		1	100	25,830	12,915	22,680	11,340	3,150	1,575
1960	42	35	7	990				18	2		2	300	35,600	17,800	27,650	13,825	7,950	3,975
Louisiana	30	23	7	1,103		100		8	1	105	2	80	19,135	9,453	17,015	8,348	2,120	1,105
1959	16	13	3	597				4		65	1	30	9,833	4,741	8,823	4,236	1,010	505
1960	14	10	4	506		100		4	1	40	1	50	9,302	4,712	8,192	4,112	1,110	600
Maine	14	11	3	634					2			25	10,780	5,390	10,500	5,250	280	140
1959	9	6	3	305					2			25	5,580	2,790	5,300	2,650	280	140
1960	5	5		329									5,200	2,600	5,200	2,600		
Maryland	38	30	8	4,323	785			2		66	2	115	100,365	33,557	99,275	33,074	1,090	483
1959	33	26	7	3,998	385			1		66	2	90	92,035	15,407	91,065	14,989	970	418
1960	5	4	1	325	400			1				25	8,330	18,150	8,210	18,085	120	65
Massachusetts	38	24	14	1,071					2	290		840	27,750	11,365	17,230	6,892	10,520	4,473
1959	15	13	2	706								440	14,150	5,660	10,555	4,222	3,595	1,438
1960	23	11	12	365					2	290		400	13,600	5,705	6,675	2,670	6,925	3,035
Michigan	87	66	21	5,383		200			2	276	1	950	125,435	46,423	113,240	40,630	12,195	5,793
1959	45	35	10	2,633		200			2	76		220	67,575	24,348	64,260	22,695	3,315	1,653
1960	42	31	11	2,750						200	1	730	57,860	22,075	48,980	17,935	8,880	4,140
Minnesota	131	52	79	2,384	98			2	2	100	3	3,797	73,531	32,705	50,006	22,096	23,525	10,609
1959	101	45	56	2,084	98			1	2	100	3	2,687	60,674	26,777	42,649	19,198	18,025	7,579
1960	30	7	23	300				1				1,110	12,857	5,928	7,357	2,898	5,500	3,030
Mississippi	34	24	10	1,130						60			21,610	14,406	18,850	12,565	2,760	1,841
1959	18	14	4	500									10,095	6,730	8,850	5,899	1,245	831
1960	16	10	6	630						60			11,515	7,676	10,000	6,666	1,515	1,010

Summary of anticipated construction of hospitals and other medical facilities (under title VI of the Public Health Service Act) if there were no limitation on Federal assistance, United States and Territories—For fiscal years 1959 and 1960—Continued

State and program year	Number of projects			Beds or units added, by type of project									Estimated cost (thousands)					
				Part C					Part G				Total program		Part C		Part G	
	Total	Part C	Part G	General hospital	Mental hospital	Chronic hospital	T. B. hospital	Health center (units)	Diagnosis or treatment (units)	Chronic hospital	Rehabilitation facilities (units)	Nursing homes	Total cost	Federal share	Total cost	Federal share	Total cost	Federal share
Missouri	41	26	15	1,319	124	450		3	5	25	1	375	$43,772	$21,886	$38,170	$19,085	$5,602	$2,801
1959	28	17	11	907		296		1	5			240	28,302	14,151	23,720	11,860	4,582	2,291
1960	13	9	4	412	124	154		2		25	1	135	15,470	7,735	14,450	7,225	1,020	510
Montana	20	9	11	93	120			1		15	1	76	6,601	2,640	4,663	1,865	1,938	775
1959	9	4	5	18	120			1			1	16	3,051	1,220	2,413	965	638	255
1960	11	5	6	75						15		60	3,550	1,420	2,250	900	1,300	520
Nebraska	16	11	5											5,710		4,900		810
1959	16	11	5											5,710		4,900		810
1960																		
Nevada	15	7	8	160					1			165	5,805	2,503	3,766	1,483	2,039	1,020
1959	9	4	5	100					1			85	3,455	1,508	2,316	938	1,139	570
1960	6	3	3	60								80	2,350	995	1,450	545	900	450
New Hampshire	16	10	6	200					5			20	5,315	1,690	4,725	1,440	590	250
1959	12	6	6	105					5			20	2,960	905	2,370	655	590	250
1960	4	4		95									2,355	785	2,355	785		
New Jersey	32	26	6	2,549				3	3		2		57,713	18,498	50,622	16,506	7,091	1,992
1959	16	14	2	1,416					1		1		24,536	6,886	20,536	5,976	4,000	910
1960	16	12	4	1,133				3	2		1		33,177	11,612	30,086	10,530	3,091	1,082
New Mexico	44	29	15	170	80		32	10	5		1	25	12,158	6,116	9,302	4,688	2,856	1,428
1959	19	11	8	65	80		32	1	5		1	25	6,028	3,051	5,172	2,623	856	428
1960	25	18	7	105				9					6,130	3,065	4,130	2,065	2,000	1,000

New York	93	81	12	5,992	155	262					5	1,420	202,612	67,537	189,687	63,229	12,925	4,308
1959	47	41	6	2,996	78	131					3	710	102,550	34,183	96,087	32,029	6,463	2,154
1960	46	40	6	2,996	77	131					2	710	100,062	33,354	93,600	31,200	6,462	2,154
North Carolina	62	41	21	1,950				10	7	290	3	260	44,634	22,318	34,109	17,055	10,525	5,263
1959	25	15	10	760				3	3	185	1	115	20,312	10,157	15,087	7,544	5,225	2,613
1960	37	26	11	1,190				7	4	105	2	145	24,322	12,161	19,022	9,511	5,300	2,650
North Dakota	17	6	11	292							2	349	9,171	3,208	5,797	1,433	3,374	1,775
1959	9	4	5	186							1	159	5,188	1,177	3,625	794	1,563	383
1960	8	2	6	106							1	190	3,983	2,031	2,172	639	1,811	1,392
Ohio	99	77	22					4	9		4		119,305	39,648	106,365	35,455	12,940	4,193
1959	74	53	21					4	9		3		71,905	23,968	60,765	20,255	11,140	3,713
1960	25	24	1								1		47,400	15,680	45,600	15,200	1,800	480
Oklahoma	25	20	5	726				1	2			120	13,652	7,208	12,542	6,652	1,110	556
1959	19	14	5	481					2			120	8,022	4,393	6,912	3,837	1,110	556
1960	6	6		245				1					5,630	2,815	5,630	2,815		
Oregon	15	8	7	320	1,500			1			1	240	15,480	5,497	13,670	4,567	1,810	930
1959	12	7	5	290	1,500			1			1	130	14,180	4,931	13,170	4,401	1,010	530
1960	3	1	2	30								110	1,300	566	500	166	800	400
Pennsylvania	33	24	9	2,357		494				157	2	222	66,042	22,030	54,362	18,126	11,680	3,904
1959	19	15	4	927		494					2	222	33,915	11,318	27,935	9,315	5,980	2,003
1960	14	9	5	1,430						157			32,127	10,712	26,427	8,811	5,700	1,901
Rhode Island	14	9	5	743					2		1	40	17,125	6,286	11,196	4,191	5,929	2,095
1959	8	4	4	248					2		1	40	8,000	2,686	3,845	1,291	4,155	1,395
1960	6	5	1	495									9,125	3,600	7,351	2,900	1,774	700
South Carolina	45	35	10	2,265	300		250	8	4	200		200	56,075	28,038	48,775	24,388	7,300	3,650
1959	19	14	5	915	100		250	4	3	100		100	28,600	14,300	24,800	12,400	3,800	1,900
1960	26	21	5	1,350	200			4	1	100		100	27,475	13,738	23,975	11,988	3,500	1,750
South Dakota	30	17	13						1		1		11,321	4,353	6,867	2,470	4,454	1,883
1959	22	13	9								1		8,311	2,838	5,147	1,610	3,164	1,228
1960	8	4	4						1				3,010	1,515	1,720	860	1,290	655

Summary of anticipated construction of hospitals and other medical facilities (under title VI of the Public Health Service Act) if there were no limitation on Federal assistance, United States and Territories—For fiscal years 1959 and 1960—Continued

State and program year	Number of projects			Beds or units added, by type of project									Estimated cost (thousands)					
				Part C					Part G				Total program		Part C		Part G	
	Total	Part C	Part G	General hospital	Mental hospital	Chronic hospital	T. B. hospital	Health center (units)	Diagnosis or treatment (units)	Chronic hospital	Rehabilitation facilities (units)	Nursing homes	Total cost	Federal share	Total cost	Federal share	Total cost	Federal share
Tennessee	46	34	12	1,286	843			6	4	177	3	40	$35,208	$13,191	$31,149	$11,778	$4,059	$1,413
1959	34	25	9	869	818			4	3	137	2	40	28,011	9,414	24,655	8,401	3,356	1,013
1960	12	9	3	417	25			2	1	40	1		7,197	3,777	6,494	3,377	703	400
Texas	30	28	2	2,211	150			3			2		54,090	21,795	52,990	21,245	1,100	550
1959	17	16	1	785	150			3			1		16,060	8,030	15,160	7,580	900	450
1960	13	12	1	1,426							1		38,030	13,765	37,830	13,665	200	100
Utah	29	23	6	680				3	2	320			38,881	17,655	30,933	13,831	7,948	3,824
1959	21	16	5	680				2	2	200			23,831	10,782	17,883	7,958	5,948	2,824
1960	8	7	1					1		120			15,050	6,873	13,050	5,873	2,000	1,000
Vermont	12	8	4	350					2		1	75	10,549	2,595	8,904	2,076	1,645	519
1959	7	4	3	293					1		1	75	7,349	1,605	5,804	1,136	1,545	469
1960	5	4	1	57					1				3,200	990	3,100	940	100	50
Virginia	70	57	13	1,869	3,735			15	3	354	4	150	85,770	45,299	77,757	41,701	8,013	3,598
1959	70	57	13	1,869	3,735			15	3	354	4	150	85,770	23,038	77,757	21,237	8,013	1,801
1960														22,261		20,464		1,797
Washington	16	15	1	1,394						30			35,916	13,317	35,498	13,150	418	167
1959	13	12	1	894						30			25,916	9,317	25,498	9,150	418	167
1960	3	3		500									10,000	4,000	10,000	4,000		
West Virginia	30	25	5	481	77	38		9	4	20			24,089	15,045	23,459	13,730	630	1,315
1959	11	8	3	276	77	38			2	20			9,959	6,480	9,509	5,755	450	725
1960	19	17	2	205				9	2				14,130	8,565	13,950	7,975	180	590

Wisconsin	91	48	43	2,139	1,051			2	10	315	2	835	95,360	38,144	71,810	28,724	23,550	9,420
1959	47	27	20	1,318	1,051			2	5	240	2	195	66,050	25,720	52,400	20,960	13,650	4,760
1960	44	21	23	821					5	75		640	29,310	12,424	19,410	7,764	9,900	4,660
Wyoming	10	6	4	32								160	3,476	1,360	2,146	695	1,330	665
1959	6	4	2	32								160	2,276	677	1,146	362	1,130	315
1960	4	2	2										1,200	683	1,000	333	200	350
Alaska	9	7	2	243			15	1			1	25	9,650	4,684	8,150	4,084	1,500	600
1959	9	7	2	243			15	1			1	25	9,650	2,340	8,150	2,040	1,500	300
1960														2,344		2,044		300
Guam	12	12						12					720	360	720	360		
1959	12	12						12					720	180	720	180		
1960														180		180		
Hawaii	22	14	8	304	150			5	5		1	140	13,848	6,206	9,170	3,926	4,678	2,280
1959	9	4	5	189	50				3		1	40	6,748	3,306	3,270	1,626	3,478	1,680
1960	13	10	3	115	100			5	2			100	7,100	2,900	5,900	2,300	1,200	600
Puerto Rico	53	49	4	2,325				35		30		151	61,295	40,290	60,470	39,740	825	550
1959	22	20	2	1,081				15				111	33,210	21,620	32,760	21,320	450	300
1960	31	29	2	1,244				20		30		40	28,085	18,670	27,710	18,420	375	250
Virgin Islands																		
1959	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
1960	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)

[1] No information.

AMERICAN HOSPITAL ASSOCIATION,
Washington, D. C. April 11, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Labor and Health, Education, and Welfare, Senate Appropriations Committee, Washington, D. C.

DEAR CHAIRMAN HILL: The American Hospital Association wishes to take this opportunity to present its views on the 1959 fiscal appropriation for the hospital survey and construction program. The association, as this committee may be well aware, has had a primary interest in the program commencing with the development of the legislation creating it, and in the entire operation of the program throughout its history. It is our firm conviction that this program not only serves a vitally needed and most desirable purpose, but that it has been operating in such a fashion as to be a model for Federal and State cooperation and as a means for the Federal Government to stimulate action on the part of State and local government together with voluntary effort.

The association is extremely pleased that, as urged in its statement, the House Appropriations Committee recommended raising the proposed appropriation for this program from the $75 million, proposed in the President's budget, to the level of last year. We are also delighted to see that just prior to the final House action on this appropriation, that the President, himself, supported raising the appropriation to that level.

We believe evidence received from State hospital organizations and from individual hospitals throughout the country, indicates that there will be a need for this program for many years to come. Some indication of the magnitude of unmet hospital need may be readily gleaned from a December 20 report of the Federal administrators of the Hospital Survey and Construction Act. In a status report to the Federal Hospital Council, which serves as the advisory group to the Surgeon General, these administrators cited general hospital construction as one of the most significant remaining needs. In their tabulation of needs which accompanied their report, they stated that according to approved State plans there was a need for over 184,000 additional general hospital beds. Predicated on present construction cost averaging in excess of $17,000 per bed, this amounts to an unmet need for about $3 billion.

We note that in its testimony before the House committee, the Public Health Service stated that the total national need for hospital beds of all kinds stands at over 1.9 million, and is fast approaching the 2 million mark. Their testimony also cited that the Nation currently has about 1.1 million acceptable beds, indicating a remaining total shortage in all classes of beds of about 800,000. Progress is being made in reducing this shortage. When this program started, the original surveys reflected the existence of about 900,000 acceptable beds. Half of this gain is due to the Hill-Burton program.

But as pressing as the need remains for new construction, the need to modernize and renovate existing facilities has been practically untouched under Hill-Burton. This need exists in most of the older and larger hospitals in the country, many of which are 50 years old and seriously inefficient. These hospitals are generally located in metropolitan centers where tremendous concentrations of population exist and where much of the basic medical teaching and research for our Nation is conducted. It is of utmost importance not only to the health care of large segments of our population, but to the health advancement for the whole population that such hospitals be modernized and renovated. Information received from some State hospital associations and a great many individual hospitals indicates their growing dissatisfaction with the program because of its failure to recognize the urgency of this need.

To obtain some definitive facts on the extent of the need for renovation and modernization, the association undertook in 1955–56 a nationwide study of the problem. The United States Public Health Service cooperated in the study which revealed that well over $1 billion was needed to renovate and modernize existing hospitals in order to make them more efficient functional facilities in light of current practices of modern medicine. Undoubtedly, this figure is minimal and underestimates the total national need for modernization and renovation. We are inclined to this view in light of another study more recently made of the hospitals of the city of New York which indicated that within that city alone the reconstruction of existing hospitals to bring them up-to-date would cost over a quarter of a billion dollars.

Moreover, it is generally accepted that general hospital plants become obsolete at the rate of 2 percent of existing beds per year. This means a loss of

approximately 9,500 general hospital beds per year, and at present construction averages, this represents a need for over $150 million per year to keep up with the obsolescence factor. It should be noted that this need alone exceeds the total annual authorization for part C of this program. We believe it is also significant to observe that in this year's testimony before the House committee, the Public Health Service stated that 13 percent of the hospital beds in the Nation are reported by the States to be in hospitals which are fire hazards or have narrow corridors or have other major inadequacies. That agency also stated that because of the rapid development of new medical techniques, functional obsolescence takes place more rapidly and many of our hospitals are today becoming more obsolete more quickly.

The American Hospital Association has repeatedly brought to the attention of the Appropriations Committees in both the Senate and the House the backlog of need for facilities, and has urged Congress to make available the full annual authorization in the act. We have pointed out further that each year we delay in moving ahead to meet the need more completely, the cost of so doing increases. Today the construction cost per bed is in excess of $17,000 and from every estimate we receive, this figure will continue to rise.

From the standpoint of need, there is ample justification for an appropriation much larger than the $121.2 million voted by the House of Representatives. In the present economic situation, moreover, we believe that a larger appropriation would make a material contribution to business recovery. The reasons for our belief that hospital construction would be an effective economic stimulant are outlined in a letter we wrote recently to Gen. John S. Bragdon, a copy of which is enclosed. In this connection, I call your attention to the fact that the appropriation authorized under part C of the Hospital Survey and Construction Act is not limited to the $150 million specified in section 621, but includes also, under section 624, the amount authorized but not appropriated for the preceding fiscal year. There is thus a present authorization of at least $210 million for fiscal year 1959, and a very much larger amount if section 624 is construed as cumulative. We believe that the facts warrant an appropriation of at least $210 million which is unquestionably authorized.

In connection with proposed use of the Hospital Survey and Construction Act for antirecession purposes, the question has been raised whether that act, in view of the 2-year availability of funds allotted to the States, is well adapted to increase quickly the volume of construction. It is our understanding that the Public Health Service is convinced that additional funds under part C could be put to work very rapidly, and that this is true not only of new construction, bu also of a substantial volume of renovation projects.

If your committee decides to recommend an appropriation under part C larger than that for the current fiscal year, we would strongly urge, in the interest of a better balanced program and to meet needs which the program has thus far almost entirely neglected, that the funds be made available for renovation and modernization projects where the need for them is more pressing than the need for new construction. We are confident that this can be done under existing law, though it will require amendment of the regulations dealing with priorities.

The renovation needed is chiefly in the larger cities, but the "special consideration" which the statute requires for rural and relatively impoverished areas obviously does not preclude use of some part of the funds for projects in these cities. The other factor specified in the statute as a basis of priorities, lack of adequate hospital facilities, can readily be—and indeed, under present conditions, we think ought to be—construed to embrace qualitative as well as quantitative considerations, and thus to warrant giving weight in the fixing of priorities to the improvement of facilities that through wear and tear and the lapse of time have become inadequate. In our view some shift of the program in this direction is called for in any event, and an increase of the part C appropriation at this time would emphasize the desirability of such a shift.

If your committee agrees with this view, we believe that it would be most helpful if the committee report were to indicate that amendment of the regulations is desirable.

We recognize that the national needs for renovation and modernization can only be met in a very limited fashion by our recommendation; and that amendment of the act providing substantial funds specifically earmarked for this purpose would accomplish much greater good. The house of delegates of this

association, our policymaking body, voted at its 1957 convention, to call upon Congress to take such action. We earnestly commend to the attention of the Congress, the views of our house of delegates on this matter.

With respect to part G of the program, it is our understanding that a good many States have reported they have no approved requests for funds for construction of certain facilities provided for in the categories. No sufficient reason has been advanced which would warrant increasing the funds for this part beyond the amount approved by the House. We are, therefore, not urging this committee to do so.

Nonuse by States of appropriated funds for part G construction merits serious consideration by the Congress. No useful purpose is served in permitting these funds to lie idle under conditions where the States do not wish to use them to construct facilities specified in this part. Much good could be accomplished if these unused funds were to be put to work to build urgently needed and fully documented part C facilities. We believe, therefore, that States having no need or desire to construct part G facilities should be permitted, after the expiration of a reasonable time interval, to transfer appropriated part G funds to part C. We bring this matter to your attention in the hope that your committee can do something to enable funds, under the circumstances outlined above, to flow from part G to part C.

In any program of the magnitude of Hill-Burton and its importance to the health of the American people, it is essential that there be on-going research. Unfortunately, until very recently we had no such program. And it was not until 1956 when this subcommittee first recommended the full authorization of $1.2 million that funds became available for research purposes. Experience has established that this amount is in no wise sufficient to enable many valuable and important areas to be explored. The backlog of research applications calls for sums far in excess of those available. While the Hill-Burton Act currently places a ceiling on what may be expended for research at $1.2 million, we firmly believe an authorization of at least $3 million would enable much meaningful and productive work to be undertaken which should result in great benefit to the American people.

We should deeply appreciate the inclusion of this letter in the record of the hearings of your subcommittee on the 1959 appropriation for the Hill-Burton program.

Sincerely yours,

KENNETH WILLIAMSON,
Associate Director, American Hospital Association.

AMERICAN HOSPITAL ASSOCIATION,
Washington, D. C., February 12, 1958.

Maj. Gen. JOHN S. BRAGDON, *United States Army (retired),*
Special Assistant to the President,
The White House, Washington, D. C.

DEAR GENERAL BRAGDON: In the administration's planning for the financing of construction projects as a measure to combat recession, I trust that due consideration is being given to the need for hospital construction, and more particularly to the need for renovation and modernization of a large number of existing hospitals. Without attempting to appraise the relative importance of hospitals as compared, for example, with schools or other public facilities, I would point out that the national concern for the adequacy of our hospital facilities, both public and nonprofit, is attested by enactment of the Hill-Burton Act and by the funds which Congress has devoted to this purpose over the past dozen years. Perhaps I should add that hospital facilities have a peculiar national importance at the present time for reasons of national security. When every city and community is a potential target, the number of persons who might be expected to survive an atomic attack is very directly related to the adequacy of the facilities and organization to care for the injured.

The most recent estimate by the Public Health Service of the peacetime need for new facilities (including the replacement of facilities no longer deemed acceptable) calls for about 185,000 general hospital beds, 400,000 mental hospital beds, 303,000 hospital beds of other kinds, and the almost 300,000 nursing home beds. About 30,000 additional general hospital beds are needed each year merely to keep pace with our growing population.

At least as pressing as the need for new construction is the need, which has been practically untouched by the Hill-Burton program, to modernize and renovate existing facilities. Many of our hospitals are housed in structures 50 years old or more, and suffer major loss of efficiency from their physical inadequacies; that is notably true of a considerable number of the great urban hospitals to which we must look, not only for a large volume of service, but also for the highest quality of care and for leadership in the whole hospital and health fields.

A survey conducted in 1955–56 jointly by the Public Health Service and this association revealed need for well over a billion dollars' worth of renovation work, much of it urgently required. I enclose a copy of a report of that survey. A later and more intensive survey by the Hospital Council of Greater New York disclosed renovation requirements of $227 million in that city alone.

Several considerations point to the efficacy of hospital construction and modernization as important elements in any program to bolster the economy through public works.

In the first place, hospital construction and reconstruction could have a more rapid impact on the economy than could many other kinds of construction. Statewide and up-to-date hospital construction plans are in existence in all the States, administrative organizations at both Federal and State levels have long been dealing with these matters, and much planning has already been done by hospital councils and by individual hospitals. We believe that if the availability of funds were assured, many projects could be quickly scrutinized by the existing public agencies and their usefulness attested, and that the work could be got underway in a relatively brief period of time.

The Public Health Service estimated a year ago that if unlimited Hill-Burton funds were available, more than $2 billion of hospital construction would take place in fiscal years 1958 and 1959, with the Federal Government footing 40 percent of the bill. We believe that even this total could be stepped up, if desired, by increasing the Federal participation. Another possibility would be a program of long-term loans, with the Federal Government subsidizing all or the major part of the interest costs, which we are confident could very quickly generate an enormous amount of work on renovation and modernization of existing hospitals in our larger cities.

In the second place, the need for work of this kind is widely spread over the United States. While new construction has been largely in the smaller cities and rural areas, there is also need in many of the rapidly expanding suburbs of larger cities. The need for renovation and modernization of hospitals is mainly concentrated in the metropolitan centers, perhaps most conspicuously in the North and East, but by no means limited to those areas. We believe that a properly designed hospital construction and renovation program would reach into every State and into nearly all major centers of population.

Finally, the building and equipping of hospitals makes more diverse calls upon the economy than does most other construction work. Construction and renovation of hospital facilities call chiefly on local labor supplies, but hospital equipment demands highly skilled labor in its production, and draws upon plants and labor which would ordinarily have no part in a program of public works.

For all of these reasons we believe that hospital construction and hospital modernization deserve an important place in any planning for public works as a measure to counteract recession.

This subject was discussed with a representative of the Council of Economic Advisers several years ago and the study referred to here was conducted following these conversations. On January 30 last the matter was discussed with Mr. Elliott Richardson, Assistant Secretary, and other members of the staff of the Department of Health, Education, and Welfare. I am sending copies of this letter to the Chairman of the Council of Economic Advisers and to the Secretary of Health, Education, and Welfare. We should be happy to discuss this subject with you or with such persons in the administration as you may suggest, and to be of any assistance we can in further examination of the matter.

Sincerely yours,

KENNETH WILLIAMSON,
Associate Director.

STATE OF MINNESOTA,
DEPARTMENT OF HEALTH,
Minneapolis, April 8, 1958.

Re hospital construction—an economic stimulus.

Hon. EDWARD J. THYE,
St. Paul, Minn.

DEAR SIR: The attached statement regarding hospital construction program and its potential as an economic stimulus with exhibits I and II have been discussed with and approved by the board of trustees of the Minnesota Hospital Association, the Twin City Hospital Council and the leadership of the United Hospital Fund of Minneapolis and Hennepin County.

It will be presented to Governor Freeman, the Minnesota Senators and Representatives in Congress, the American Hospital Association, the American Medical Association, the United States Public Health Service, and the hospital construction authorities in all States and Territories.

Respectfully,

ROBERT N. BARR, M. D.,
Secretary and Executive Officer.

STATEMENT REGARDING HOSPITAL CONSTRUCTION PROGRAM AND ITS POTENTIAL AS AN ECONOMIC STIMULUS

The State of Minnesota under the leadership of Governor Freeman is making every effort to alleviate the economic recession and its associated unemployment in this area.

Numerous proposals in Congress include the acceleration of various civil public works toward this end, notably, a $2 billion program for the construction and modernization of post offices during the next 3 to 5 years and additional billions appropriated to accelerate the Federal-aid highway program and Federal housing.

Although considerable information has been developed relative to the possibilities and advantages of an accelerated hospital construction program, only recently have such proposals received favorable attention in Washington.

Congressman John E. Fogarty (Democrat, Rhode Island), chairman of the House Committee on Appropriations, in a recent letter to President Eisenhower requested the restoration of Hill-Burton funds to the full authorized appropriation of $210 million for fiscal 1959 and incorporated the recommendations of the American Hospital Association for a hospital construction and renovation program as an antirecession measure. Representative Fogarty drew attention to the American Hospital Association's survey on renovating existing hospital facilities when he said, "Many of the Nation's hospitals are over 50 years old, and many suffer major losses of efficiency from inadequate physical plants. A 1955–56 nationwide survey conducted jointly by the Public Health Service and the AHA revealed a need for well over $1 billion to renovate existing hospitals, much of which is urgently required."

The United States Public Health Service recently collected information for the administration from all States relative to the amount of hospital construction which could be accomplished with unlimited Federal funds made available through a crash program. These figures are as follows:

	Number of projects	Estimated total cost	Estimated Federal share (Hill-Burton)
1959	1,285	$1,346,342,000	$500,606,000
1960	934	983,759,000	443,348,000
Total	2,219	2,330,101,000	943,954,000

Minnesota's figures provided for this purpose (see p. 1 and 6 of attached exhibit I) included 7 projects planned for fiscal 1959 when the administration's budget proposed a $75 million appropriation and 68 additional selected projects known to be in a position to proceed with construction on or before June 30, 1959.

These 75 projects are tabulated in a construction time schedule to demonstrate the rapidity with which construction could be started, as follows:

Projects under construction by—	Number of projects	Estimated total cost	Estimated Federal share
Aug. 1, 1958	19	$19, 516, 948	$8, 222, 285
Dec. 31, 1958	19	10, 725, 000	4, 088, 475
June 30, 1959	37	31, 004, 000	12, 414, 500
Total	75	61, 245, 948	24, 725, 260

It is recommended that in consideration of the hospital-construction program as an antirecession measure, Congress develop the program in the following sequence:

1. An appropriation for fiscal year 1959 of $210 million for the hospital and medical facilities construction programs and $1.2 million for research as presently authorized. The present House appropriation bill provides for $121.2 million.

2. An extension of the program for at least 5 years and preferably 10 years to permit more realistic planning at the local, State, and Federal levels.

3. A "crash" program through additional grants under the Hill-Burton Act with appropriate adaptations in the method of distributing the funds. These adaptations should allow encumbrance of funds on the basis of readiness to proceed with construction and allow flexibility among the categories of facilities.

Combining the regular construction appropriation with an appropriation for a "crash" program would be unwise since this would penalize those communities with high priorities which are not in a position to proceed with construction immediately. There is also the danger of total loss of the program at the termination of the so-called emergency.

The extension and expansion of the hospital-construction program as a significant antirecession measure is justified by the following:

1. The administrative machinery exists and construction can be expedited on short notice to assist a tremendous backlog of projects for which final plans are complete and local funds are available.

2. The construction will develop on the basis of sound planning since State hospital construction agencies have concentrated intensively on the development and continuous revision of statewide plans for hospitals and related facilities since 1947.

3. The Federal dollar will be matched by more than an equal amount of local funds.

4. Hospital construction and the manufacture and installation of hospital equipment require a greater variety of highly skilled personnel than do most other types of construction.

5. The completed facilities will be operated entirely at local expense and each additional hospital bed constructed provides permanent employment for 1½ to 2 additional hospital personnel in its operation.

6. Metropolitan areas have the greatest need and hospital planning is well developed in these areas but construction has not kept pace with population increases. Here unemployment is most critical.

7. Such a program will provide a real stimulus in the planning and development of facilities for the care of the chronically ill and the aging including rehabilitation services. Modern, well-planned nursing homes and homes for the aged represent one of the most critical needs in the health field today.

8. Minnesota's experience indicates that with an intensive recruitment and training program, the quality and quantity of the needed staff can keep pace with the construction of hospitals.

Minnesota's data of needs as shown in exhibit I more than justifies:

1. The full authorized appropriation under Hill-Burton of $210 million, and

2. An additional appropriation of $1 billion available during fiscal years 1959 and 1960 as an emergency measure. Previous information in this

letter which summarizes exhibit I shows that the entire amount tabulated below could be placed under contract prior to or by June 30, 1959.

	Federal appropriations	Estimated allotments to Minnesota
1. Hill-Burton	$210,000,000	$4,255,088
Part C	150,000,000	3,077,000
Part G	60,000,000	1,178,000
2. Emergency	1,000,000,000	19,800,000
Total	1,210,000,000	24,055,088

The 75 projects shown in exhibit I represent selected projects known to be in a position to begin construction before or during fiscal year 1959 and do not include additional projects now being developed in accordance with the State plan which have come to the attention of the Department of Health since February 17, 1958, nor do they include renovation and modernization of existing hospitals concerning which the Department had no exact information at that time. It is estimated that a like amount of construction and renovation will develop for fiscal year 1960. Since 1948 the average volume of construction in Minnesota has totaled $19.3 million per year. This represents only 50 percent of the estimated $36 million needed each year for the next 10 years to liquidate existing bed deficits, provide for increasing population and replace and remodel obsolete facilities (see exhibit II).

The only additional expenditures needed for the administration of such a greatly expanded program would be a moderate increase of existing staffs at the State and National levels. Minnesota's planning and construction budget has consistently averaged less than ½ of 1 percent of the total volume of construction carried out in the State.

In summary, we are of the firm opinion that an expanded hospital-construction program as outlined would be the most productive of all construction expenditures made by Congress as a measure of counteracting recession. Its effect on unemployment will be immediate and will continue throughout the life of the institutions built. It will assist in the provision of facilities which are urgently required to protect the health of our Nation and it can be accomplished without new machinery at national and local levels to administer the program.

MINNESOTA DEPARTMENT OF HEALTH, DIVISION OF HOSPITAL SERVICES, FEBRUARY 17, 1958

EXHIBIT I.—*Response to Public Health Service request of February 15, 1958—Proposed Hill-Burton program for fiscal year 1959 based on $75 million (President's budget)*

(ANTICIPATED FUNDS TO MINNESOTA)

Part C	$1,091,810
Part G:	
Nursing homes	68,475
Rehabilitation facilities	68,475
Chronic hospital	100,000
D & T	100,000

Location	Name of facility	Type of construction	Type of facility	Part C	Part G	Beds added	Actual cost		Current status
							Total	Federal share	
1. Northfield	City hospital	Addition and alteration.	General	X		25	$593,000	[1] $158,000	Under construction by Aug. 1, 1958.
2. Faribault	Community hospital	New	do	X		71	1,195,000	[2] 315,000	Under construction by Aug. 1, 1958.
3. Aurora	do	do	do	X		50-60	1,080,000	486,000	New location; under construction by June 30, 1959.
4. Minneapolis	St. Mary's Hospital	do	Psychiatric	X		48	450,000	[3] 132,810	Preliminary plans complete; under construction by Aug. 1, 1958.
5. St. Paul	Bethesda Hospital	do	Nursing home.		X (Nursing home.)	108	935,948	68,475	Under construction by June 30, 1958.
6. Minneapolis	Minneapolis rehabilitation center.	do	Rehabilitation.		X (Rehabilitation).		1,800,000	[3] 68,475	Under construction by Dec. 31, 1958.
7. Minneapolis	University student health service.	Addition and alteration.	D & T		X(D & T)		1,012,000	100,000	Under construction by June 30, 1958.

[1] Plus $111,000 from 1958 fiscal funds.
[2] Plus $223,000 from 1958 fiscal funds.
[3] To be completed with 1960 fiscal funds.

NOTE.—Totals, $1,530,000. Part C, $1,091,810. Part G: Nursing homes, $68,475; Rehabilitation facilities, $68,475; Chronic: Decision to be made summer, 1958; many potential sponsors for chronic or nursing home units; D. & T., $100,000.

Summary

Time schedule	Number of projects	Estimated total cost	Estimated Federal share
Under construction by Aug. 1, 1958	5	$4,185,948	$774,285
Under construction by Dec. 31, 1958	1	1,800,000	68,475
Under construction by June 30, 1959	1	1,012,000	100,000
Total	7	6,997,948	942,760

Projects which could be placed under construction if additional amount of $225,000,000 were made available on Apr. 1, 1958. Anticipated funds to Minnesota, approximately $4,500,000 (pts. C and G combined)

A. CONTRACTS WHICH COULD BE AWARDED BY AUG. 1, 1958—PRESENT HILL-BURTON PRIORITY

Location	Name of facility	Type of construction	Type of facility	Part C	Part G	Beds added	Actual cost		Current status
							Total	Federal share	
1. St. Paul	St. Joseph's Hospital	Addition	Psychopathic unit.	X		50	$500,000	$225,000	Funds available; on final drawings.
2. Owatonna	City Hospital	Addition and alteration.	General	X		20	1,000,000	450,000	Funds available; final drawings complete.
3. Baudette	Community Hospital	do	do	X		12	200,000	90,000	Do.
4. Minneapolis	Lutheran Deaconess Hospital.	do	do	X		95	1,606,000	723,000	Funds available; on final drawings.
5. Minneapolis	Northwestern Hospital	do	do	X		142	3,800,000	1,710,000	Do.
6. St. Paul	Miller Hospital	Alteration	do	X			169,000	76,000	Do.
7. St. Paul	Bethesda Hospital	Addition and alterations.	do	X		75	1,101,000	495,000	Do.
8. Tracy	Community Hospital	do	do	X		5	300,000	135,000	Funds available; final drawings complete.
9. St. Peter	do	New	do	X		40	720,000	324,000	Bond issue voted; on final drawings.
10. Hutchinson	do	Addition and alterations.	do	X			150,000	68,000	Funds available; on working drawings.
11. Madelia	Lutheran Memorial Home	New	Home for aged with infirmary.		X (nursing home).	[1] 20	420,000	63,000	Funds available; final working drawings complete.
12. Jackson	Good Samaritan Home	Addition	Nursing home.		do	16	50,000	23,000	Funds available; on final drawings.
13. Lafayette	Lafayette Home	New	do		do	45	315,000	142,000	Do.
Total							10,331,000	4,524,000	

[1] Of 60 beds.

NOTE.—Total amount of $4,500,000 in Federal funds could therefore be under construction by Aug. 1, 1958, without considering item IIIB—Projects without regard to Hill-Burton priority and item IIIC—Projects for modernization and major repair not presently eligible under Hill-Burton program.

Projects which could be placed under construction if unlimited Federal funds were made available on April 1, 1958

ADDITIONAL PROJECTS WHICH COULD BE PLACED UNDER CONSTRUCTION BY AUGUST 1, 1958

Location	Name of facility	Type of construction	Type of facility	Part C	Part G	Beds added	Actual cost		Current status
							Total	Federal share	
1. St. Paul	St. Joseph's Hospital	New	General	X		250	$5,000,000	$2,250,000	On final plans.
2. Minneapolis [1]	Minneapolis Rehabilitation Center.	do	Rehabilitation.		X			674,000	Funds available; plans being developed.
Total							$5,000,000	$2,924,000	

[1] Same project as shown in first table.

ADDITIONAL PROJECTS WHICH COULD BE PLACED UNDER CONSTRUCTION BY DECEMBER 31, 1958

1. Rochester	Olmsted County Community Hospital.	Addition and alteration.	General	X		50	800,000	360,000	Regional center; bond issue proposed; planning.
2. Mt. Lake	Bethel Hospital	New	do	X		25	450,000	203,000	Funds available; planning.
3. Duluth	Public Health Rehabilitation Center.	do	Public Health Rehabilitation Center.	X			1,800,000	810,000	Planning. Bond issue proposed.
4. Little Falls	St. Gabriel's	Addition and alteration.	General	X		26	750,000	338,000	On preliminary plans. On fund drive.
5. Moose Lake	Community Hospital	New	do	X		25	450,000	203,000	$200,000 bond issue voted.
6. Robbinsdale	North Memorial Hospital	Addition and alteration.	do	X		50	1,500,000	675,000	Funds available; preliminary plans developed.
7. Bagley	Clearwater County Memorial.	do	do	X		8	160,000	72,000	Local interest.
8. New Prague	Community Memorial Hospital.	do	do	X		20	200,000	90,000	Local interest. Preliminary plans developed.
9. Albert Lea	Naeve Hospital	Alteration	do	X			100,000	45,000	Architect selected.
10. Faribault	St. Lucas Hospital, convalescent and addition.	Addition and alteration.	Nursing home.		X (nursing home).	50	250,000	113,000	Funds available; on final plans.
11. International Falls	Koochiching County Home.	New	do		do	80	560,000	252,000	Final drawings completed.
12. Luverne	Good Samaritan Home	do	do		do	30	210,000	95,000	Preliminary plans developed.
13. Minneapolis	Ebenezer Home	Addition	do		do	100	800,000	360,000	Do.

14. Moorhead	Eventide Home	Addition and alteration.	do		do	44	130,000	59,000	Do.
15. Northfield	Minnesota Odd Fellows Home.	New	do		do	30	210,000	95,000	Funds available; on final plans.
16. Red Wing	Seminary Home	Addition	do		do	25	75,000	34,000	Addition proposed to unit now under construction.
17. St. Paul	St. Paul's Church Home	New	do		do	40	280,000	126,000	On preliminary plans.
18. Willmar	Bethesda Home	Addition	do		do	60	200,000	90,000	Architect selected.
Totals							8,925,000	4,020,000	

ADDITIONAL PROJECTS WHICH COULD BE PLACED UNDER CONSTRUCTION BY JUNE 30, 1959

1. St. Paul	Midway Hospital	Addition and alterations.	General and chronic unit.	X	X	25-Gen. 50-Chronic	1,150,000	517,500	Proposed fund drive; architect selected.
2. Winona	Winona General	New	General	X		100	2,000,000	900,000	Fund drive proposed, architect selected.
3. Caledonia	Community Hospital	Addition and alteration.	do	X		15	200,000	90,000	Local interest; preliminary plans developed.
4. Minneapolis	University Hospital	Addition to rehabilitation center.	Rehabilitation.		X (rehabilitation).	30	600,000	270,000	Preliminary planning.
5. Minneapolis	Asbury Hospital	Remodel	Nursing home.		X (nursing home).	177	250,000	113,000	Do.
6. Minneapolis	State Board of Health Building.	New	Laboratory	X			2,295,000	350,000	Request to 1959 legislature.
7. International Falls	Memorial Hospital	Addition and alterations.	General	X		30	400,000	180,000	Local interest. Preliminary plans complete.
8. Mora	Kanabec County Hospital	do	do	X		7	100,000	45,000	Local interest.
9. Wabasha	St. Elizabeth's Hospital	New	do	X		50	800,000	360,000	Local interest. Preliminary plans developed.
10. Waconia	Community Hospital	do	do	X		50	900,000	405,000	Architect working on preliminary plans.
11. Jackson	Community Hospital	do	do	X		25	450,000	203,000	Local interest. Architect on preliminary plans.
12. Minneapolis	Doctors' Memorial Hospital.	Addition	do	X		44	935,000	421,000	Funds available; on preliminary plans.
13. Stillwater	Lakeview Hospital	New	do	X		60	1,020,000	459,000	Architect developing preliminary plans.
14. Anoka	Community Hospital	do	do	X		65	1,500,000	675,000	Local interest; preliminary plans developed.
15. Canby	Swenson Memorial Hospital.	New	General	X		25	450,000	203,000	Local interest.
16. Fosston	Fosston Hospital	do	do	X		30	540,000	243,000	Do.
17. Ada	Municipal Hospital	Alteration	do	X			100,000	45,000	Do.

Projects which could be placed under construction if unlimited Federal funds were made available on April 1, 1958—Continued

ADDITIONAL PROJECTS WHICH COULD BE PLACED UNDER CONSTRUCTION BY JUNE 30, 1959—Continued

Location	Name of facility	Type of construction	Type of facility	Part C	Part G	Beds added	Actual cost		Current status
							Total	Federal share	
18. Roseau	Community Hospital	Addition and alteration.	General	X		12	175,000	79,000	Local interest. Preliminary plans complete.
19. Red Wing	do	New	do	X		100	1,700,000	765,000	Local interest.
20. Waseca	Memorial Hospital	do	do	X		25	450,000	203,000	Local interest; architect selected.
21. St. Cloud	St. Cloud Hospital	Alteration, general addition.	General, chair unit.	X	X	[1] 50	500,000	225,000	Local interest.
22. Albert Lea	Good Samaritan Home	New	Nursing home.		X (nursing home).	100	700,000	315,000	Local interest; architect selected.
23. Albany	Albany Nursing Home	do	do		do	50	350,000	158,000	Local interest. On preliminary plans.
24. Blue Earth	Blue Earth Home	do	do		do	60	420,000	189,000	Architect selected.
25. Columbia Heights	Crestview Lutheran Home.	do	do		do	50	350,000	158,000	Fund raising underway.
26. Duluth	St. Ann's Home	do	do		do	50	350,000	158,000	Fund drive underway.
27. Glenwood	Glenwood Home for Aged	New	Nursing Home.		do	50	350,000	158,000	Local interest.
28. Greenbush	Greenbush Hospital	Addition	Nursing home unit.		do	20	75,000	34,000	Preliminary plans developed.
29. Hutchinson	Hutchinson Home	New	Nursing home.		do	30	210,000	95,000	Local interest.
30. Marshall	Marshall Hospital	do	Nursing home unit.		do	60	350,000	158,000	Do.
31. St. Paul	Wilder Foundation Home	do	Nursing home.		do	75	1,800,000	304,000	Preliminary plans developed.
32. Thief River Falls	Valley Christian Home	do	do		do	50	350,000	158,000	Do.
33. Tyler	Tyler Old Folks Home	do	do		do	30	210,000	95,000	Do.
34. Winona	Sauer Memorial Home	do	do		do	36	252,000	113,000	Do.
35. Zumbrota	Zumbrota	do	do		do	30	210,000	95,000	Local interest.
36. Anoka	State Hospital	do	Medical and surgical.	X	do	500	7,500,000	3,375,000	On preliminary plans; request for construction to 1959 legislature.
Totals							29,992,000	12,314,500	

[1] Chairs.

Summary of proposed construction—"Crash" program

Time schedule	Number of projects	Estimated total cost	Estimated Federal share
Under construction by July 1, 1958	13	$10,331,000	[1] $4,524,000
Additional project under construction by Aug. 1, 1958	1	5,000,000	2,924,000
Under construction by Dec. 31, 1958	18	8,925,000	4,020,000
Under construction by June 30, 1959	36	29,992,000	12,314,500
Total	68	54,248,000	23,782,500

[1] Approximately $4,500,000 to Minnesota if $225,000,000 available Apr. 1, 1958.

NOTE.—Attention is called to the fact that the projects as listed above may fall in a different priority order when the 1958-59 revision of the Minnesota Hospital plan is completed.

A substantial amount of additional construction would materialize very rapidly particularly in the category of urgently needed nursing home beds if unlimited Federal funds were made available.

EXHIBIT II

MINNESOTA DEPARTMENT OF HEALTH

DIVISION OF HOSPITAL SERVICES

April 7, 1958

Hospitals and related facilities in Minnesota, 1948 through 1957

Total estimated cost of construction completed	$126,486,343
Total estimated cost of construction under way	66,088,781
Total estimated cost of work in planning stage	108,501,828
Total	301,076,952
Total Hill-Burton funds received:	
Part C, original program	$20,807,920
Part G, amendment	1,340,662
Total	22,148,582

Proportion of Hill-Burton funds received ($22.1 million) to total amount completed and under way ($192.6 million) : 11.5 percent.

Average volume of work completed and under way during each of past 10 years: $19.3 million.

Conservative estimate of needed expenditures for each of next 10 years to liquidate existing bed deficits, provide for increasing population, and replace and remodel obsolete facilities: $36 million.

Proportion of work completed and under way during each year since 1948 to actual amount needed each year: 54 percent.

MINNESOTA DEPARTMENT OF HEALTH

DIVISION OF HOSPITAL SERVICES

April 8, 1958

SUMMARY OF PROJECTS IN BASE AREA WHICH COULD BE ASSISTED WITH HILL-BURTON FUNDS ON BASIS OF DATA DEVELOPED ON FEBRUARY 17, 1958

(Subject to 1958–59 and subsequent revisions of Minnesota hospital plan)

I. With $75 million appropriation for fiscal year 1959, as proposed in the President's budget (anticipated to Minnesota—Pt. C, $1,091,810; pt. G, $68,475, N. H. and rehabilitation; and $100,000, Chr. and D. & T.):

	Hill-Burton funds
Minneapolis:	
St. Mary's Psychiatric Unit (pt. C)	[1] $132,810
Minneapolis Rehabilitation Center (pt. G)	[1] 68,475
University Students' Health Service addition (pt. G)	100,000
St. Paul: Bethesda Hospital, nursing home unit (pt. G)	68,475

[1] Plus funds from 1960 fiscal allotment or "crash" funds.

II. With $121.2 million appropriation for fiscal year 1959 as passed by the House on March 27 (same amount as appropriated for 1958 fiscal year) (anticipated in Minnesota—pt. C, $2,055,000; pt. G, same as above):

	Hill-Burton funds
Minneapolis: St. Mary's Psychiatric Unit (pt. C)	[1] $203,000

Plus the other projects as listed under item I above.

[1] Full participation at 45 percent of estimated cost.

III. With $210 million appropriation (maximum as authorized in the acts) (anticipated to Minnesota—pt. C, $3,077,000; pt. G, $196,348 N. H. and rehabilitation; and $392,696 Chr. and D. & T.):

	Hill-Burton funds
Minneapolis:	
St. Mary's Psychiatric Unit (pt. C)	$203,000
University Students' Health Service additions (pt. G)	100,000
Minneapolis Rehabilitation Center (pt. G)	196,348
Minneapolis or St. Paul or rural area, chronic disease or nursing home units (pt. G)	392,696
St. Paul: St. Joseph's Psychiatric Unit (pt. C)	225,000

IV. With a "crash" program of $225 million which would provide approximately $4.5 million to Minnesota (on basis of pts. C and G combined):

	Estimated Hill-Burton funds
Minneapolis:	
Lutheran Deaconess Hospital, additions and alterations	$723,000
Northwestern Hospital, additions and alterations	1,710,000
St. Paul:	
Miller Hospital alterations	76,000
Bethesda Hospital, additions and alterations	495,000

SUMMARY OF PROJECTS IN BASE AREA WHICH COULD BE ASSISTED WITH HILL-BURTON FUNDS ON BASIS OF DATA DEVELOPED ON FEB. 17, 1958

V. With an unlimited crash program:

	Estimated Hill-Burton funds
By Aug. 1, 1958—Projects listed under item IV above, plus:	
Minneapolis: Ebenezer Home, addition	360,000
St. Paul: St. Joseph's Hospital, new general hospital	2,250,000
By Dec. 31, 1958:	
Minneapolis: Ebenezer Home, addition	360,000
St. Paul: St. Paul Church Home, new	126,000
Robbinsdale: North Memorial Hospital, additions and alterations	675,000
By June 30, 1959:	
Minneapolis:	
University Hospitals, addition to rehabilitation center	270,000
Asbury Hospital, nursing home (remodeling)	113,000
Doctors' Memorial Hospital, addition and alterations	421,000
New State Board of Health Building	350,000
St. Paul:	
Midway Hospital, addition and alterations	517,000
Wilder Foundation, nursing home	304,000
Stillwater: New general hospital	459,000
Anoka: New general hospital	675,000

Since February 17, 1958, information has been obtained regarding the following additional projects:

	Estimated Hill-Burton funds
Minneapolis:	
Abbott Hospital, completion of surgical suite	Unknown
St. Mary's Hospital, general hospital areas not being completed in present program because of inadequate funds	$513,000
Mount Sinai Hospital, general hospital alterations	Unknown
St. Paul:	
St. Luke's Hospital, nursing home unit	Unknown
St. Joseph's Hospital, new general hospital	Unknown

United Hospital Fund of Minneapolis and Hennepin County—Tentative Statement Regarding Federal Funds

NATURE OF THE PROGRAM

The United Hospital Fund was voluntarily organized in 1955 to investigate the obviously urgent hospital needs of the community and to raise funds for a building program to meet those needs. Thoroughgoing scrutiny by physicians, lay groups, public-health officers, hospital and management consultants resulted in an integrated plan for the modernization and expansion of 12 hospitals and 3 health agencies. These institutions operate without subsidy, have demonstrated needs in relation to their use by the community, have shown they are able to provide substantial capital funds through normal financing arrangements, and have presented specific plans for building. The UHF program took account of the total needs of the community, and the role of each institution was examined accordingly.

COMPLETION OF THE UHF PROGRAM

Will replace 525 beds now in use in non-fire-resistant or otherwise obsolete facilities.

Will increase the number of acute beds in the participating hospitals by 881 (from 2,390 to 3,271).

Will increase the number of chronic beds in general hospitals by 505 (from 36 to 541).

Will introduce 82 psychiatric beds into general hospitals in the community (from none).

Provides a blook bank servicing all hospitals, and will provide a rehabilitation center stressing vocational rehabilitation, and an expanded psychiatric clinic for children.

It is the opinion of the State department of health and UHF that these expanded facilities can be staffed immediately on completion. It is the opinion of the many groups consulted that this program will relieve an immediate and pressing need for hospital space, and will provide adequate facilities for at least 10 years.

FINANCING THE PROGRAM

The total program encompasses $34.5 million in hospital construction in Hennepin County. Of this amount, hospitals and health agencies are expected to provide $15,548,000 through mortgaging and other business resources. Hill-Burton funds have provided, to date, $623,675 to assist with facilities for psychiatric care and chronic units in general hospitals. Ford Foundation grants supply $1,357,000.

Public contributions are needed in the amount of $17 million, the UHF campaign goal.

PRESENT STATUS

More than $13 million in cash and pledges has been contributed. Nine building projects are in various stages of construction involving over $27.5 million in contracts. Two of the projects are virtually finished and in use. Six building projects are not yet started. They can be begun as soon as funds are available.

The United Hospital Fund has transferred $3,286,000 to the various institutions, according to a contractual payment program.

LIMITING FACTORS

UHF is obligated to allocate a stipulated quota to each of the 15 participating institutions. If the goal of $17 million is not reached, each of the 15 allocations will be reduced by an equal percentage. Such reduction would diminish the building plans of some institutions now under construction, would halt others unfinished, and would effectively prevent the beginning of several projects.

Each participating institution is under contract to refrain from initiating any independent appeal for public funds for a period of 5 years.

Each participating institution is using its mortgage potential. In most instances, borrowing power is dependent on receipt of the UHF allocation. Thus a reduction in UHF allocation doubly reduces available building funds.

A reduction in UHF allocations is then seen to have a magnified effect on the overall building program.

POSITION OF THE UHF IN REGARD TO HILL-BURTON FUNDS

Hennepin County, like most metropolitan centers, has not so far been eligible for Federal funds under the Hill-Burton Act, except in the areas of psychiatric, chronic, and rehabilitation facilities.

It is the position of the UHF that the interests of the national economy and the public health would be served by providing outside the regular Hill-Burton appropriation, additional Federal funds which would permit flexibility in the use of such funds to assist general hospitals in the metropolitan areas which are in a position to proceed.

Investment in hospitals strengthens the economy in general in the following ways:

A. Hospital construction in itself creates many jobs, not only in the actual work of construction but in the manufacture and sale of the tremendous variety of materials and equipment that go into a general hospital.

B. Hospital expansion creates continuing and permanent jobs, in the ratio of 1½ to 2 full-time, permanent employees needed to service each hospital bed.

Investment in a metropolitan hospital center strengthens the economy beyond the limits of the city itself:

A. The urban center serves as training and research center for hospital personnel who may go on to fill skilled jobs elsewhere. The specialized facilities and the research activities of the metropolitan hospitals often develop jobs which may then be demanded elsewhere.

B. The urban hospital center serves more than the resident population. In Hennepin County, 17 percent of all hospital beds are occupied by nonresidents. As transportation becomes speedier and medicine becomes more specialized this interchange between city and country will increase, with a stimulating effect on the medical-hospital economy in general.

Investment of public funds in the UHF has the following merits:

A. This is a well-articulated program, designed to meet known needs in an expanding community. Its realization will assure the efficient functioning of 15 solvent, much-used and community-approved institutions, with annual payrolls well over $24 million a year.

B. The community's support of the UHF program is shown in the contributions of over $13 million to date, by far the largest sum of charitable contributions ever given to one drive in Hennepin County. Many manufacturing and commercial establishments have made corporate contributions averaging $100 or more per employee. Average individual contributions of $45 in a business establishment are common.

C. As shown above, failure to reach the $17 million goal will jeopardize the total $34½ million construction program in a proportion far greater than the actual sum involved. Further, because 525 of the community's hospital beds are located in obsolete or non-fire-resistant buildings which must soon be closed, failure to meet the goal could leave the community with a net loss in the number of acceptable hospital beds. Each bed thus lost could mean the loss of the 2 full-time jobs required to serve 1 hospital bed.

D. Reduction in the UHF building program would have incalculable and far-reaching depressing effects on the economy of the entire region, through the reduction in research, training, and education activities which supply personnel and services to the region.

E. The UHF program, is a major factor in the economy of the area. Its goal of $17 million in public contributions is a springboard for hundreds of millions of dollars worth of continuing activity in the fields of health, education, and welfare.

STATEMENT OF SENATOR CHURCH

Senator HILL. Senator Church had expressed a desire to appear this morning to present a statement, but was unable to do so due to another committee meeting. His statement will, however, be made a part of the record at this point.

(The statement referred to follows:)

Senator Hill, members of the committee, I appreciate the opportunity to appear before you to request your sympathetic consideration of two particular items of deep importance to the people of Idaho. I refer to the hospital construction funds and the rural library services appropriation.

In the case of the Hill-Burton funds, I urge approval of the money authorized by the House of Representatives. I have previously submitted to this committee letters from people in Idaho describing the plans for hospital construction which depend upon the approval of these funds. I can think of no more appropriate field for Federal assistance in this time of unemployment than the field of hospital construction. Factories may be idle and business establishments closed in many places, but the hospitals of the Nation are, unfortunately, doing a booming business. There are no short weeks, no layoffs for sickness and accident. As long as there are Americans denied hospital space, there is a need for generosity and for the kind of farsighted investment in the future which this subcommittee has always been willing to make. I urge your support for the full amount of Hill-Burton funds as contained in the House bill.

In the rural library program, I would like to request your consideration of an increase from the $5 million authorized by the House to the $7½ million authorized by the enabling legislation. I appreciate the courage and vision demonstrated last year by this committee and by the House committee in going beyond the President's requests to the $5 million level. The same courage and generosity was demonstrated again this year by the House, in again exceeding the Presidential requests. I do feel, however, that the time has come to allow this program, which will soon lapse altogether, to attain its full scope as visualized in 1956 when the enabling act was passed. In connection with this request, I am submitting for the record of these hearings, two letters from librarians in the State of Idaho whose professional judgments carry great weight with me. Thank you.

STATE OF IDAHO,
IDAHO STATE LIBRARY,
Boise, Idaho, April 11, 1958.

Hon. FRANK CHURCH,
Senator for Idaho, United States Senate,
Washington 25, D. C.

MY DEAR SENATOR CHURCH: As you are aware, the health, education, and welfare appropriation has passed the House. The Library Services Act appropriation voted in the House was $5 million for fiscal year 1959. When this appropriation reaches the Senate, it is sincerely hoped that you will support it at least the $5 million level for fiscal year 1959. This amount of Federal aid is required for Idaho to continue its expanded program of rural library service.

Very cordially yours,

EUGENE D. HART,
State Librarian.

IDAHO STATE COLLEGE,
Pocatello, Idaho, April 14, 1958.

Hon. FRANK CHURCH,
United States Senator,
United States Senate Office Building,
Washington 25, D. C.

DEAR SENATOR CHURCH: As you know, the House recently approved $5 million as the budget for the administration of the Federal Library Services Act next year. I am hopeful that you will at least support this figure, and I am also hopeful that you might support the actual amount needed for proper fulfillment of the terms of the act, $7,500,000.

As you no doubt will remember, this bill called for $7,500,000 per year for 5 years to improve rural library service. The first year only a little over $2 million was appropriated, and last year just $5 million was appropriated. In other words, in the first 2 years less than was needed for 1 year was available. Despite this handicap, a great deal has been done. I know that Eugene Hart has sent you the facts and figures on Idaho's library picture. I hope you will do all you can to back the full amount—$7,500,000—for the Federal Library Services Act for next year, keeping in mind that sending satellites into the air will hardly do us much good if our electorate is uneducated and without the availability of good books and trained librarians.

When one realizes that in the 75 public libraries in Idaho there are a total of 12 individuals with professional library degrees, and most of these, of course, in the 2 or 3 largest city libraries—one becomes aware of the great need for improvement of Idaho library service. We are making some progress; we will

make more when the Federal Government makes available the money on which we have been planning to help the rural communities that need it.

I hope that you will do all you can to help rural library service in Idaho.

Sincerely yours,

ELI M. OBOLER,
ALA Federal Coordinator for Idaho.

NEED FOR HOSPITAL CONSTRUCTION IN OKLAHOMA

Senator HILL. I have a letter from Senator Kerr regarding the estimate of need for the hospital and medical facilities construction program in Oklahoma. His letter and the attached estimate will be made a part of the record at this point.

(The letter referred to follows:)

UNITED STATES SENATE,
Washington, D. C., March 17, 1958.

Hon. LISTER HILL,
Chairman, Committee on Labor and Public Welfare,
United States Senate.

DEAR LISTER: I am transmitting herewith an estimate of need for the State of Oklahoma under the hospital and medical facilities construction program.

I would appreciate very much having these tables made a part of the official record of your committee, and I want to urge your support of adequate funds to help meet the needs as set forth by our commissioner of health, Dr. Grady Mathews.

With kindest regards, I am,

Sincerely yours,

ROBERT S. KERR.

STATE OF OKLAHOMA, HOSPITAL AND MEDICAL FACILITIES CONSTRUCTION PROGRAM—ESTIMATE OF NEED, JAN. 15, 1958

I. Summary of need, fiscal year 1959, and beyond

	Projects	Beds	Estimated total cost	Estimated Federal share
Total, pt. C	32	726	$13,782,242	$7,295,294.24
Total, pt. G	5	120	1,110,000	555,500.00
Total, C and G	37	846	14,892,242	7,850,794.24

II. RECOMMENDATION

Five-year extension of the program at the full authorized level of $150 million per year for part C, and $60 million per year for part G.

At the above appropriation level, the total allotment to Oklahoma will approximate $8,500,000 for part C, and $940,000 for part G. These amounts exceed the present estimate of need by approximately $1,204,705, and $384,500, respectively. It is considered, however, that this excess will readily be absorbed by projects unknown to the State agency at the moment.

It should also be recognized that other States have estimated their needs collectively in excess of a 5-year, full-appropriation level. There is no doubt that Oklahoma could demonstrate similar utilization of matching funds before the termination of a 5-year extended program.

State of Oklahoma, Part C, Hill-Burton Program

Estimate of need, Jan. 15, 1958

Name of project	Location	Size (beds)	Type	Estimated total cost	Estimated Federal share	Total estimated Federal share
A. Split projects carried forward from previous year						$404,173.24
B. Fiscal year 1958-59:						
Comanche County Memorial Hospital	Lawton	85	General addition	$1,000,000	$500,000	
Craig County Hospital	Vinita	35	General	500,000	250,000	
Guymon City Hospital	Guymon	25	General addition	350,000	175,000	
Jackson County Memorial Hospital	Altus	16	do	232,000	116,000	
Latimer County Hospital	Wilburton	16	Health center	300,000	150,000	
Midwest City Hospital	Midwest City	50	General hospital	750,000	375,000	
Oklahoma General Hospital	Clinton	(1)	(1)	80,000	40,000	
Ponca City Hospital	Ponca City	50	General addition	1,000,000	500,000	
Pushmataha County Hospital	Antlers	30	General	400,000	200,000	
Shawnee City Hospital	Shawnee	50	do	750,000	375,000	
Stephens County Hospital	Duncan	50	do	750,000	375,000	
Thomas Memorial Hospital	Thomas	10	General addition	100,000	50,000	
Tillman County Hospital	Frederick	10	do	100,000	50,000	
Valley View Hospital	Ada	50	do	600,000	300,000	
Subtotal (14 projects)		477		6,912,000		3,456,000.00
C. Fiscal year 1959-60:						
Deaconess Hospital	Oklahoma City	50	General addition	750,000	375,000	
Grove Hospital	Grove	10	Health center	150,000	75,000	
Pawhuska City Hospital	Pawhuska	30	General	450,000	225,000	
Okmulgee City Hospital	Okmulgee	30	Addition and public health center	400,000	200,000	
Weatherford Hospital	Weatherford	25	General	380,000	190,000	
University Medical Center	Oklahoma City	100	General addition	3,500,000	1,750,000	
Subtotal (6 projects)		245		5,630,000		2,815,000.00
D. Modernization projects (12 projects)				1,240,242	620,121	620,121.00
Total, pt. C (32 projects)		726		13,782,242		7,295,294.24

[1] Modernize.

STATE OF OKLAHOMA, PART G, HILL-BURTON PROGRAM

Estimate of need, Jan. 15, 1958

Name of project	Location	Size (beds)	Type	Estimated total cost	Estimated Federal share	Total estimated Federal share
Fiscal years 1958–59 and 1959–60:						
A. Diagnostic and treatment centers:						
Valley View Hospital	Ada		Outpatient department	$100,000	$50,000	
Ponca City Hospital	Ponca City		do	100,000	50,000	
Subtotal (2 projects)				200,000		$100,000
B. Nursing homes:						
Cushing City Hospital	Cushing	40		300,000	150,000	
Jackson County Hospital	Altus	30		261,000	130,500	
Tulsa Geriatric Authority	Tulsa	50		350,000	175,000	
Subtotal (3 projects)		120		911,000		455,500
Total, pt. G (5 projects)		120		1,110,000		555,500

LETTER FROM MR. JOHN B. ERNSDORFF

Senator HILL. I have here a letter from Mr. John B. Ernsdorff, business manager, St. Joseph's Hospital, Lewiston, Idaho, addressed to Senator Frank Church, which will appear in the record at this point:

(The letter referred to follows:)

ST. JOSEPH'S HOSPITAL,
Lewiston, Idaho, February 21, 1958.

Hon. FRANK CHURCH,
United States Senate, Washington, D. C.

DEAR SENATOR CHURCH: Your letter of February 11, 1958, and the news from the Washington, D. C., news services regarding congressional appropriation prompted me in writing this letter.

The reliable news services indicate that the Federal appropriation for the Hill-Burton Act and the extension of the act itself is in jeopardy. A decrease in the appropriations for the Hill-Burton Act has been requested by President Eisenhower. In view of these circumstances it might be well that hospital people voice their objections to the proposed decrease in and the elimination of the Hill-Burton Act.

My objections are based on the following facts:

Heretofore the only projects eligible for funds through the State administration of the act were A priority projects. A priorities were determined by State plan prepared from Federal regulations and formula. The only areas eligible for A priority were those in need of additional beds.

The State plan approved by the Health, Education, and Welfare office considered St. Joseph's Hospital an area center hospital. An area center hospital might be more technically termed a medical center hospital, which, because of its geographical location and population growth, must offer and maintain facilities for the more specialized patient care at the smaller community hospitals and medical staffs cannot economically maintain. This is our obligation to the progress of our community and to those of areas. Our hospital presently has sufficient beds but the related diagnostic, treatment, and service facilities to offer the proper medical assistance are not acceptable facilities. Consequently we are not classified as a C priority project. (The actual medical nursing care is excellent in spite of the inconvenient and inefficient facilities.)

It is my contention that priority classifications has been inadequate and inequitable on the basis of the overall area hospital needs. I have personal knowledge that ours is not an isolated situation but that the same condition exists in our State of Idaho and other adjoining States. No doubt the same situation exists in the Middle West and Eastern States.

Most of the present bed needs at this and many other States as A priority projects are now taken care of. However, many presently planned projects such as ours for area center hospitals to enlarge and improve the services for particular and specialized service is still incomplete.

The past 10 years of grants will have been wasted unless these B and C priority projects now planned can become a reality.

Of what future value will a 10-, 15-, or 20-bed hospital have in any community if the area center hospital has not been able financially to meets its obligations in the improvement of their facilities to keep abreast of the advances of medical science particularly in the field of specialized services? In fact the hospitals in our category are less able financially to improve these facilities without outside donated or Federal grant funds since our costs are higher in the operation of the hospital because of the need of special service facilities, while at the same time our patient census had basically decreased. The latter is in light of area population growths. The new small community hospitals have brought about these changes.

Philanthropic assistance is definitely on decline insofar as general hospitals are concerned.

Our project and many more like it would suffer. And as our program suffers so will the proved medical hospital care for all people serviced by these areas center hospitals.

I don't wish to be presumptious but I know that you will do everything possible to retain the requested appropriation for this year and to extend the program for at least another 2 years. Thank you for your present and past favors, advice, and assistance.

Sincerely yours,

JOHN B. ERNSDORFF, *Business Manager.*

Hospitals and Medical Care

STATEMENT OF DR. KENNETH R. NELSON, CHIEF, DIVISION OF HOSPITALS, ACCOMPANIED BY DR. JAMES V. LOWRY, ACTING CHIEF, BUREAU OF MEDICAL SERVICES; MRS. APOLLONIA O. ADAMS, CHIEF, DIVISION OF NURSING RESOURCES; AND JAMES F. KELLY, DEPARTMENTAL BUDGET OFFICER

APPROPRIATION ESTIMATE

"Hospitals and Medical Care

"[Hospitals and medical care:] For carrying out the functions of the Public Health Service under the Act of August 8, 1946 (5 U. S. C. 150), including [$1,186,000] *$1,866,000* to be available only for payments for medical care of dependents and retired personnel under the Dependents' Medical Care Act [(70 Stat. 250–254)] (*37 U. S. C., chap. 7*), and under sections 307, 321, 322, 324, 326, 331, 332, 341, 343, 344, 502, 504, and 810 of the Public Health Service Act, Private Law 419 of the Eighty-third Congress, as amended, and Executive Order 9079 of February 26, 1942, including purchase and exchange of farm products and livestock; conducting research on technical nursing standards and furnishing consultative nursing services; *purchase of not to exceed eleven passenger motor vehicles for replacement only;* and purchase of firearms and ammunition; [$44,399,000] *$44,309,000*, of which $1,000,000 shall be [exclusively] available *only* for payments to the Territory of Hawaii for care and treatment of persons afflicted with leprosy: *Provided*, That when the Public Health Service establishes or operates a health service program for any department or agency, payment for the estimated cost shall be made in advance for deposit to the credit of this appropriation.

"[The limitation under this head contained in the Third Supplemental Appropriation Act, 1957, for payments for medical care of dependents and retired personnel under the Dependents' Medical Care Act is increased by such sum or sums as may be necessary for the purpose.]"

Amounts available for obligation

	1958 appropriation	1958 budget estimate	1959 House allowance
Appropriation in annual act	$44,399,000	$44,309,000	$44,730,000
Reimbursements	4,507,000	4,329,000	4,329,000
Total obligations	48,906,000	48,638,000	49,059,000

Obligations by activities

	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Operation of hospitals	5,881	$34,960,050	5,831	$34,862,000	5,839	$35,283,000
2. Operation of outpatient clinics and offices	472	4,867,050	477	4,700,000	477	4,700,000
3. Operation of health units	92	459,000	92	503,000	92	503,000
4. Coast Guard medical services	103	1,256,000	103	1,167,000	103	1,167,000
5. Development and coordination of nursing resources	48	344,900	48	361,000	48	361,000
6. Nurse training grants		3,000,000		3,000,000		3,000,000
7. Personnel detailed to other agencies	43	381,000	39	388,000	39	388,000
8. Dependents' medical care		1,852,000		1,866,000		1,866,000
9. Payments to Hawaii		1,000,000		1,000,000		1,000,000
10. Administration	113	786,000	113	791,000	113	791,000
Total obligations	6,752	48,906,000	6,703	48,638,000	6,711	49,059,000

Obligations by objects

	1958 appropriation	1959 budget estimate	1959 House allowance
Total number of permanent positions	6,752	6,703	6,711
Full-time equivalent of all other positions	112	112	112
Average number of all employees	6,572	6,515	6,523
Number of employees at end of year	6,815	6,757	6,765
01 Personal services	$32,420,950	$32,050,700	$32,096,700
02 Travel	363,200	375,100	381,100
03 Transportation of things	343,200	347,700	347,700
04 Communication services	209,900	209,800	209,800
05 Rents and utility services	596,700	601,000	601,000
06 Printing and reproduction	86,500	88,600	88,600
07 Other contractual services	3,498,700	3,457,600	3,463,600
Services performed by other agencies	907,600	705,700	705,700
08 Supplies and materials	5,013,950	5,153,800	5,153,800
09 Equipment	478,750	647,500	680,500
10 Lands and structures	850	0	330,000
11 Grants, subsidies, and contributions	4,013,100	4,013,100	4,013,100
Contribution to retirement fund	1,546,300	1,586,500	1,586,500
13 Refunds, awards, and indemnities	6,900	0	0
15 Taxes and assessments	119,500	115,900	115,900
Deduct charges for quarters and subsistence	−700,100	−715,000	−715,000
Total obligations	48,906,000	48,638,000	49,059,000

Hospitals and medical care—New positions requested, fiscal year 1959

Operation of outpatient clinics and offices	Grade	Positions	Annual salary
Nurse	GS-8	1	$5,510
Administrative staff assistant	GS-6	1	4,350
Medical staff technician	GS-4	1	3,415
Grades established by act of July 1, 1944 (42 U. S. C. 207):			
Senior assistant grade		2	16,761
Total new positions		5	30,036

Summary of changes

	Positions	Amount
1958 actual appropriation	6,752	$44,399,000
Adjustments: Increased reimbursements		−249,500
1959 base	6,752	44,149,500
1959 appropriation request	6,703	44,309,000
Net change requested	−49	+159,500

Summary of Changes—Continued

	1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount
Increases:				
For mandatory items:				
Retirement contributions annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)		+$39,700		+$39,700
Annualization costs for 28 additional positions authorized in 1958		+14,300		+14,300
Subtotal		+54,000		+54,000
For program items:				
Operation of hospitals:				
Maintenance of the 1958 supply level in 1959		+153,100		+153,100
Improvement in supply and drug issues		+41,800		+41,800
Increase in supply inventory level		+23,100		+23,100
Increase in equipment purchases		+187,850		+187,850
Decrease resulting from reduced patient load	−50	−275,900	−50	−275,900
Net of other increases and decreases		−19,650		−19,650
Construction of quarters and dwellings, $330,000, and research and training at Carville Hospital, $91,000			+8	+421,000
Subtotal	−50	+110,300	−42	+531,300
Operation of outpatient clinics and offices:				
Increase for Atlanta, Ga., outpatient clinic	+5	+40,000	+5	+40,000
Decrease in Federal hospitalization		−112,300		−112,300
Decrease in equipment purchases		−14,700		−14,700
Subtotal	+5	−87,000	+5	−87,000
Operation of health units: Increase for supplies		+1,100		+1,100
Coast Guard medical services: Savings from 1958 estimate		−89,000		−89,000
Development and coordination of nursing resources: Increase in connection with evaluation conference on nurse training grants program		+18,600		+18,600
Personnel detailed to other agencies: Savings from 1958 estimate	−4	−41,000	−4	−41,000
Dependents' medical care: Increase in utilization of hospitalization by dependents		+192,500		+192,500
Total change requested	−49	+159,500	−41	+580,500

EFFECT OF HOUSE ACTION

Operation of hospitals

The House approved the full amount of our request and added $421,000 to the operation of hospitals activity to provide for research and training and construction of quarters and dwellings at the leprosarium in Carville, La. As noted by the House committee, this hospital is located in an isolated area on the Mississippi River between New Orleans and Baton Rouge. Due to its location and the lack of adequate facilities, it is not an attractive place for the professional people necessary for its operation. One of the greatest needs is new quarters for the staff to replace 11 sets which were obsolete in 1921—$210,000 is included for this purpose. Another great need is for a research program. Practically no research is being done at the present time even though this is the only institution in the continental United States dealing just with this disease—$91,000 is included in the bill for research and training. The remaining portion of the increase, $120,000, is for 10 small dwellings to provide family quarters for married couples who are patients at the hospital. At present, these patients are made to live in different dormitories. The increase recommended by the House committee will help considerably in improving the program for the care of patients with leprosy.

AUTHORIZATIONS UNDER TITLES I AND II

Senator HILL. Now we will take up the question of nursing with Mrs. Adams, Chief of the Division of Nursing Resources.

Mrs. Adams, we are very happy to have you here.

Mrs. ADAMS. Thank you.

Senator HILL. Now, Senator Pastore, since you are in a hurry, maybe the best procedure would be for you to ask your questions now.

Senator PASTORE. Yes; I would like to ask a question or two. I had a group of hospital superintendents from Rhode Island visit me during the Easter recess and raised the question of the $2 million under title I and $3 million under title II, and there is a question as to whether or not the authorization had been stipulated at that point in the act itself, and I find out it has not. I also note, by looking in the record, it has been raised from last year from $2 million to $3 million under title II.

Mrs. ADAMS. Title II started with $2 million and went to $3 million.

Senator HILL. But title I was $1 million and was raised to $2 million.

Mrs. ADAMS. That is right.

LEGISLATIVE AUTHORIZATIONS

Senator HILL. I think it would be well to have placed in the record at this point the legislative authorizations for appropriations for these two items.

(The material referred to follows:)

EXTRACTS FROM THE HEALTH AMENDMENTS ACT OF 1956

TITLE I—GRADUATE TRAINING OF PROFESSIONAL PUBLIC HEALTH PERSONNEL

SEC. 101. Title III of the Public Health Service Act (42 U. S. C., ch. 6A, subch. II) is amended by adding at the end of part A the following new section:

"TRAINEESHIPS FOR PROFESSIONAL PUBLIC HEALTH PERSONNEL

"SEC. 306. (a) There are hereby authorized to be appropriated for the fiscal year ending June 30, 1957, and for each of the next two fiscal years, such sums as the Congress may determine, to cover the cost of traineeships for graduate or specialized training in public health for physicians, engineers, nurses, and other professional health personnel. * * *"

TITLE II—ADVANCED TRAINING OF PROFESSIONAL NURSES

SEC. 201. Title III of the Public Health Service Act (42 U. S. C., ch. 6A, subch. II) is amended by adding after section 306 (added by section 101 of this Act) the following new section:

"TRAINEESHIPS FOR ADVANCED TRAINING OF PROFESSIONAL NURSES

"SEC. 307. (a) There are hereby authorized to be appropriated for the fiscal year ending June 30, 1957, and for each of the next two fiscal years, such sums as the Congress may determine, to cover the cost of traineeships for the training of professional nurses to teach in the various fields of nurse training (including practical nurse training) or to serve in an administrative or supervisory capacity. * * *"

NURSING GRANTS APPLICATIONS PENDING

Senator PASTORE. Now they talked to me specifically about title I and title II and their contention was that if more money were made

available they certainly have the facilities and applications have been made and that this money could be wisely and prudently spent.

Now, I would like to know why it is limited at $2 million—how many applications we have, and if applications are pending, where this money could be utilized?

Mrs. ADAMS. Senator Pastore, I can speak best about title II. Title I is in a different bureau. I have some information on it, but I can speak accurately on title II.

Senator PASTORE. All right.

Mrs. ADAMS. There are many more applications from acceptable, qualified candidates than we have traineeships for today.

Senator PASTORE. How much money would you require over and above the amount that is being sought of $3 million, to satisfy prudently these applications which are not being processed?

Mrs. ADAMS. We have not estimated the total amount needed. We know only the number of qualified applicants within the last 2 years, in relation to the number of traineeships available.

Senator PASTORE. If the committee were of the mind—and I cannot speak for the committee, I mean, this is a hypothetical question—but if the committee were of the mind to raise that amount from $3 million in order to satisfy this backlog, how much money do you think you would have to seek in order that it could be wisely spent without giving you more money than could be prudently spent to carry out the purposes of this program?

Mrs. ADAMS. I can give you an example:

This past year at the time we had awarded 773 traineeships, we had over 3,000 qualified applicants. That is not the full report of all of the 60 schools in the program. That is a report of 30 schools.

Senator PASTORE. Now I think you are quite familiar with this: Have they not sought or attempted to raise it from $3 million to $7 million?

Mrs. ADAMS. The nursing organizations have recommended that sum, sir.

USE OF ADDITIONAL FUNDS

Senator PASTORE. Without committing yourself as to whether or not it should be increased, and as to whether you are recommending that it might be increased, if it were increased to the $7 million, would you have more money than you could prudently use?

Mrs. ADAMS. At this time I cannot specifically say, not knowing the question as to how large the facilities of the schools might be and whether they are able to accept this amount of $7 million.

Senator PASTORE. What made you raise it from $2 million to $3 million?

Mrs. ADAMS. We know that they can accept at least 100 percent more than what we now have.

Senator PASTORE. Well, 100 percent more than what you have now—you could very wisely raise it to $6 million, and could handle it?

Mrs. ADAMS. The schools can handle it, they have informed us.

Senator PASTORE. I merely wanted to get that in the record. I do not know what the intentions of the chairman or the rest of the committee are, but you are saying to us today that you are requesting $3 million, but if the amount were doubled, you certainly have the

facilities and you certainly have the program and you certainly have the procedures by which this money can be spent very wisely?

Mrs. ADAMS. From information we have to date, that is right, sir.

Senator PASTORE. Now to whom may I address the questions on title I?

Senator HILL. In that connection I think you testified on that to the House; did you not?

Mrs. ADAMS. Yes.

Senator HILL. I have before me the hearings before the House, and this is page 230, and it says:

Mr. FOGARTY. They tell me in Rhode Island they could use five times as much money as has been appropriated. How does that compare with the rest of the country?

Mrs. ADAMS. The rest of the country could use at least 100 percent more.

Senator PASTORE. All right, fine. I was not familiar with that.

ORIGINAL REQUEST

Senator HILL. How much was originally requested of the Department for the advanced training of professional nurses as authorized in title II for fiscal year 1959?

Mrs. ADAMS. The original request to the Department was for $4 million.

STATEMENT OF DR. LEROY E. BURNEY, SURGEON GENERAL

TRAINING PUBLIC HEALTH PERSONNEL

Senator HILL. Dr. Burney will answer your questions on title I.

Dr. BURNEY. Senator Pastore, there has been equal interest in title I, which related to the training of professional public health workers, physicians, engineers, veterinarians, public health nurses, and similar groups.

Now similar to the remarks Mrs. Adams made about the professional nurses, there have been 2 or 3 times as many applicants for these traineeships under title I as we have had funds to supply, and the schools of public health are able to handle these, and also recognizing that some of these individuals do not always go to a school of public health. For example, an engineer might go to an engineering school to secure graduate training for industrial waste.

Senator PASTORE. How do you feel about that, along the lines that I have questioned Mrs. Adams? Do you feel that if you had more than the $2 million you could spend it wisely?

Dr. BURNEY. That is represented, sir, by the fact that we did request additional funds.

Senator PASTORE. How much did you request?

ORIGINAL REQUEST FOR FUNDS

Dr. BURNEY. We requested $4 million of the Department.

Senator PASTORE. $4 million. Twice as much as you are getting?

Dr. BURNEY. Yes. I might say, too, Senator Pastore, that we have noted also that the States themselves, and local areas, have been stimulated to spend a little more of their own funds for training.

In other words, we are not only stimulating having more training from Federal funds, but also the States themselves are spending a little bit more.

Senator PASTORE. Well, I do not want to make a whistlestop speech, but I know of no place where you can spend your money more wisely than to improve the caliber of your professional people, more than the bricks and the mortar. It strikes me that this is the crux of this whole program and is the spirit of it, and if the States are willing to do their share, and we recognize the fact that the need is there, as of the moment, I do not know of any place where we could more wisely spend our money.

However, I repeat again, that depends upon the committee; but I thought I would like to state it at this point in the record.

Thank you very much.

Senator HILL. Is there anything you would like to add?

PENDING REPORT ON TRAINING PROGRAM

Dr. BURNEY. No, except that as requested and required by the act which Congress passed relative to this training, we are having training conferences on both title I and title II this coming summer and will prepare a report to be submitted to the Congress next January, relative to the value of this program, its effectiveness, the unmet needs, and what additional requirements are necessary, whether they are in the way of resources, building, staff, and so forth, and to go even further, and meet the population increases, increasing health problems and so on.

Senator HILL. Let me ask you this question:

You spoke on the report yesterday when we were talking about somewhat the same matter; the act that we passed, that provided for the report was passed in 1956, just about 2 years ago, and I think the act was signed about July of 1956.

Dr. BURNEY. Yes, sir.

Senator HILL. Why have we had to wait for so long? We won't get it until January. What we have practically done is to miss 3 years, 3 fiscal years.

Dr. BURNEY. I may be wrong on this, sir, but I believe that the act specified this.

Senator PASTORE. January 1.

Senator HILL. Did the act itself specify January?

Dr. BURNEY. After there had been the necessary time to assess the impact.

Senator HILL. Time to assess the impact of the act. I just wanted to make it clear in my own mind, and have it on the record. If the act specified it, you, of course, followed the act.

Clerk's note: The Health Amendments Act of 1956 contains the following sentence in both title I and title II:

> The Surgeon General shall submit to the Congress, on or before January 1, 1959, a report of such conference, including any recommendations by it relating to the limitation, extension, or modification of this section.

Dr. BURNEY. We have some preliminary ideas.

Senator HILL. Would you like to give expression to those preliminary ideas?

Dr. BURNEY. I would not want to bias the very outstanding people from outside of the Government who are advising us this summer on these things, who actually are working on this. We already have some planning committees from outside of the Government.

NEED TO EXPAND SCHOOLS

Senator HILL. Senator Pastore, you were presiding over another committee meeting yesterday and could not be with us, but there are today just 11 public health schools in the country. I think there is no question but what they need to be expanded, and perhaps other schools established. They very definitely need help and support if we are going to have the Public Health personnel that we must have to do the job in taking care of these children, because, as the Senator so well stated, the key figure is the human being.

Senator PASTORE. I think, in view of the fact that we have such a tremendous shortage in these professions, people who are qualified to assume the responsibilities, that if we improve our efficiency by this graduate training and we actually learn the procedures by which we can do a better job with less people, in the long run I know of no better investment.

Dr. BURNEY. I might add that another dividend that we did not expect to accrue from this is that the schools now are having more physicians who have never had any previous experience in public health apply for traineeships in public health, which means more are entering public health, which is, of course, what we need very badly.

Senator HILL. Of course that is encouraging. That is encouraging. It would certainly be most unfortunate to think that those who are interested in going in, and who are qualified to go in, cannot go in because we have not the facilities or teacher personnel to train them.

Dr. BURNEY. With all of the newer programs, sir, that we are getting into, it puts an increasing load upon the Service—chronic diseases, engineering problems with regard to industrial waste. Thus the larger professional groups that are trained in schools of public health would make a difference, of course.

Senator HILL. Do you have anything else to add?

Dr. BURNEY. No, sir.

Senator HILL. Senator DWORSHAK, did you have any questions on this matter that Dr. Burney is covering?

Senator DWORSHAK. No, thank you.

Senator HILL. We are certainly very much obliged to you, Doctor.

Dr. Nelson, we are happy to have you here, sir. Do you have a statement for the record?

PREPARED STATEMENT

Dr. NELSON. Mr. Chairman, I have a statement I would like to submit for the record and, with your permission, a summary that I would like to read to the committee.

Senator HILL. Fine, Doctor.

(The statement referred to follows:)

Statement of Chief, Division of Hospitals

PURPOSE OF APPROPRIATION

Mr. Chairman and members of the committee, the Public Health Service under the "Hospitals and medical care" appropriation conducts a program of direct patient care for various groups of persons whom the Congress has at different times in our history declared eligible for medical care by the Federal Government. Among these, the largest single category of persons is the American seaman who has been provided medical care since the establishment of the Marine Hospital Service under President John Adams in 1798. Other major beneficiary groups for whom the Public Health Service provides medical care are officers and men of the United States Coast Guard, the Coast and Geodetic Survey, and the Public Health Service. Federal employees who are injured in the performance of their work are referred to us by the Bureau of Employees' Compensation for treatment and evaluation of their injuries. In addition to the general medical and surgical, and tuberculosis hospitals, the Public Health Service operates three specialized hospitals for the treatment and rehabilitation of persons addicted to narcotic drugs and afflicted with leprosy. Reimbursements to the Territory of Hawaii for the care of leprosy patients in the islands are also made from this appropriation. The "Hospitals and medical care" appropriation further includes funds for resource and utilization studies directed toward the expansion of the Nation's manpower resources in the critically short field of nursing. The conduct of Federal employee health programs on a reimbursable basis and the assignments of Public Health Service officers to other Federal programs on a reimbursable basis are also covered by this appropriation. The most recent responsibilities added to the foregoing programs and which must be covered by this appropriation are the provision of grants for professional nurse traineeships under the Health Amendments Act of 1956, and the medical care program for members of the uniformed services and their dependents under the Dependents' Medical Care Act.

ACCOMPLISHMENT WITH INCREASE IN 1958 APPROPRIATION

For several years, the increasing cost of hospital operation nationwide has created serious problems for the Service and its beneficiaries. The hospitals supported by this appropriation lacked sufficient financial resources to operate professionally adequate programs. These accumulative annual insufficiencies compounded the operating problems to the point where every indication existed that the program of patient care had become acutely deficient. To verify this condition, the Surgeon General ordered evaluation studies to be conducted at 5 United States Public Health Service hospitals in October of 1956. Each of the surveys was performed by a team of outstanding experts in hospital operations who were in no way connected with the Public Health Service. The aim of the overall project was to obtain competent objective opinions from outside the Federal Government concerning the quality of care provided, adequacy of staff, financial resources, supplies, equipment, drugs, and physical facilities. The survey reports confirmed the inadequacy of staffing, equipment, and supplies and pointed to related evils such as dilution or absence of services and deteriorating staff morale—all resulting from lack of funds.

In recognition of the need for elevating the existing quality of medical care, the Bureau of the Budget and the President recommended significant increases in the 1958 budget. Congress gave full recognition to the need by approving all the increases requested. In addition, actual reimbursements in the hospitals are expected to exceed the estimates presented to the Congress a year ago. With the help of the Congress in the form of increased appropriation and utilization of additional reimbursements, it is possible to improve medical care in 1958 as follows: 298 positions are added to the 1957 level. The unit rate of inpatient supply issue is raised from $0.71 per day to $0.77, an increase of 9 percent. Outpatient supply unit rates similarly are raised 5 percent from $0.50 to $0.52½ per visit. In addition, by the close of the year, we expect our inventory levels to be raised by $61,200 which is an increase of 7 days' supply over the 1957 levels. The equipment situation was improved through the use of funds from the 1957 supplemental appropriation.

FUND REQUIREMENTS FOR 1959

The request of $48,638,000 for fiscal year 1959 provides for a net increase in obligations of $647,000 which is composed of the following items of increase and decrease respectively:

Annualization of contributions to retirement fund and positions new in 1958	$54,000
Increased hospitalization of dependents under the dependent's medical care program	680,000
Maintenance of the 1958 supply level in 1959	153,100
Improvement of drug and supply inventories and unit level of issue	64,900
Additional equipment needs in the hospitals	187,850
Maintenance of the clinic at Atlanta which was formerly supported from another appropriation	40,000
Conduct of an evaluation conference on the nurse training grant program	18,600
Total increases	1,198,450

The decreases proposed which are generally related to a fall in workload are as follows:

Reduction in personal services	241,300
Reduction in outside hospitalization in other Federal hospitals	112,300
Reduction in contractual services, subsistence, supplies, and other miscellaneous categories of expense	197,850
Total decreases	551,450
Net increase in obligations	647,000

The estimates before you, therefore, as can be seen from the items outlined above proposes in general to cover a higher level of cost of dependents' medical care and a continuation of the 1958 program with an improvement in the hospitals of the level of issue of supplies and equipment.

EFFECT OF HOUSE ACTION

The House approved the full amount of our request and added $421,000 to provide for research and training and construction of quarters and dwellings at the leprosarium in Carville, La. As noted by the House committee, this hospital is located in an isolated area on the Mississippi River between New Orleans and Baton Rouge. Due to its location and lack of adequate facilities, it is not an attractive place for the professional people necessary for its operation.

Practically no research is being done at the present time even though this is the only institution in the continental United States devoted to the treatment of this disease; $91,000 is included in the bill for research and training at Carville. Research and training are integral components of the proper practice of modern medicine. With the drugs, equipment, and knowledge available today an alert, progressive, and imaginative young physician cannot be readily attracted to, or retained in, any program which does not provide the tools and opportunities by which he can best devote his skills to the betterment of man.

Also $210,000 is included to replace 11 sets of staff quarters which were obsolete in 1921. I believe that with the provision of opportunities for research, training, and better living, we can attract and retain the high quality of professional skills which is needed for the advancement of the program for the care of leprosy.

The remaining portion of the increase, $120,000, is for 10 small dwellings to provide family quarters for married couples who are patients at the hospital. At present, these patients are required to live in different dormitories. The increase recommended by the House committee will help considerably in improving the program for the care and study of patients afflicted with leprosy.

HOSPITALS AND MEDICAL CARE

Dr. NELSON. Mr. Chairman and members of the committee, the "Hospitals and medical care" appropriation conducts a program of direct patient care for American seamen, officers and men of the

United States Coast Guard, the Coast and Geodetic Survey, and the Public Health Service, Federal employees injured in the performance of their work, persons addicted to narcotic drugs, and persons afflicted with leprosy.

The appropriation provides reimbursements to the Territory of Hawaii for the care of leprosy patients, funds for conducting resource and utilization studies in the critcally short field of nursing, and for conducting Federal employee health programs and the assignments of Public Health Service officers to other Federal programs on a reimbursable basis.

The most recent responsibilities added to the foregoing programs are the provision of funds for grants for professional nurse traineeships and of medical care for members of the uniformed services and their dependents under the Dependents' Medical Care Act.

In recognition of the need for elevating the existing quality of medical care, Congress approved all the inrceases requested for this program for 1958. In addition, actual reimbursements in the hospitals are expected to exceed the estimates presented to the Congress a year ago.

With the help of the Congress in the form of increased appropriations and utilization of adidtional reimbursements, it was possible to improve medical care as follows: 298 positions were added to the 1957 level; the unit rate of inpatient supply issue was raised from $0.71 per day to $0.77, and outpatient supply unit rates similarly were raised from $0.50 to $0.52½ per visit. In addition, by the close of the year, we expect our inventory levels to be raised by $61,200, which is an improvement of 7 days' supply over the 1957 levels. The equipment situation was improved through the use of funds from the 1957 supplemental appropriation.

The estimate before you proposes, in general, a continuation of the 1958 program with an improvement in the hospitals of the level of issue of supplies and equipment. Increased requirements of $680,000 to cover a higher level of costs of dependents' medical care are also included in the request.

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tools and opportunities by which he can best devote his skills to the betterment of man.

Included is $210,000 to replace 11 sets of staff quarters which were obsolete in 1921. I believe that, with the provision of opportunities for research, training, and better living, we can attract and retain the high quality of professional skills which is needed for the advancement of the program for the care of leprosy.

The remaining portion of the increase, $120,000, is for 10 small dwellings to provide family quarters for married couples who are patients at the hospital. At present, these patients are required to live in different dormitories. The increase recommended by the House committee will help considerably in improving the program for the care and study of patients afflicted with leprosy.

I would be very happy to answer any questions that you have, Mr. Chairman.

QUESTION OF RESEARCH CENTER

Senator HILL. Doctor, would these additional funds provided give you any funds for any research?

Dr. NELSON. Yes, sir.

Senator HILL. How much would go for research?

Dr. NELSON. $91,000.

Senator HILL. The whole $91,000 would go for research. I was not clear on that. The House gave you a total raise of $421,000; is that right, Doctor?

Dr. NELSON. Yes, sir.

Senator HILL. As you have brought out, and as Dr. Burney brought out in his statement yesterday, last year you had some of the Nation's leading experts in hospital administration visit your hospitals and evaluate your problems in five of your hospitals; is that right?

Dr. NELSON. That is right, Mr. Chairman.

Senator HILL. And Dr. Burney said:

> The deficiencies in hospital personnel, supplies, and equipment was specifically noted. In some instances, shortages were so acute as to affect seriously quality and quantity of hospital care.

That is the gist of the statement. Do you agree with that?

Dr. NELSON. Yes, sir.

EFFECT OF PERSONNEL DEFICIENCIES

Dr. LOWRY. Mr. Chairman, if I may, I would like to point out that in one of these surveys the deficiencies of the training staff were of such a degree that the American Psychiatric Association put this psychiatric hospital on a conditional-approval basis as an accredited hospital. I cite this just to show you the trouble that we are having at the present time in terms of personnel shortages. In this particular field it is very difficult to recruit trained people because of the attractiveness of salaries outside, and our only recourse is to train our own young people interested in this kind of work.

Senator HILL. Is this institution still, today, on a conditional qualified basis as far as accreditation is concerned?

Dr. LOWRY. Senator Hill, it will remain that way until the association reviews it again, and we would not want them to review until [illegible]rove the staff.

Senator HILL. In other words, you have not been able to improve the staff since the first findings by the committee; is that right?

Dr. LOWRY. We will be able to improve it somewhat on July 1, because some of our residents in training will be available for assignment there. They will have completed their training on July 1.

BUDGET ALLOWANCE

Senator HILL. I note that your request to the Department was $51 million. The budget allowance was $44,309,000. Do you have the breakdown there as to how you propose to spend that difference?

Dr. NELSON. Mr. Chairman, you are speaking of the difference between the $51 million and the $44,309,000?

Senator HILL. Yes.

Dr. NELSON. The difference of $6,691,000 we can account for in this way: There was a reduction of $4,607,000 in the operation of hospitals, which included 437 positions for operating our hospitals.

Senator HILL. Excuse me 1 minute. You mean that you would have had 437 more positions with the $51 million than you had with the $44,309,000?

Dr. NELSON. That is right.

Senator HILL. Approximately how many patients do you have in your hospitals now, the hospitals we are discussing?

Dr. NELSON. 5,400, roughly, in the total system. That is 16 hospitals. Our present personnel-patient ratio runs roughly 1.43.

REDUCTION IN OUT-PATIENT LOAD

Senator DWORSHAK. You refer to a reduced patient load. Can you give us some indication of what that reduction is from last year to this year?

Dr. NELSON. You mean our estimated reduction?

Senator DWORSHAK. In your statement you say the decrease resulting from reduced patient load will eliminate fifty positions.

Dr. NELSON. We estimate that our average patient load will drop from 5,390 this year to 5,318. That is the inpatient quota. In addition, we run outpatient clinics. We anticipate that our load of 555,000 outpatients which we handle each year in our hospital outpatient clinics, will remain the same.

Senator DWORSHAK. Has the trend been downward in the number of patients for several years, or this just an unusual situation?

Dr. NELSON. In 1957 our inpatients were 5,336. Our estimate for this year, and we are running very close to it, is 5,390. Our present estimate is based on statistics furnished to us by the Maritime Commission on their estimates of people employed in the sea industry.

Senator DWORSHAK. Do you think you will have this figure for 5 years?

Dr. NELSON. I do not have that, but may I submit that for the record?

Senator DWORSHAK. Yes.

(The information referred to follows:)

Average daily patient load, fiscal year 1954–59 hospitals and medical care

Fiscal year:	*Total*
1954	5,621
1955	5,410
1956	5,396
1957	5,336
1958 (estimate)	5,390
1959 (estimate)	5,318

INDIAN HOSPITALS

Senator HILL. In that connection, 5 years ago, many of these hospitals were Indian hospitals, and of course, under the Interior Department.

Mr. HARLOW. This item doesn't cover Indian hospitals, Mr. Chairman.

Senator HILL. No, that is a separate item. Indian hospitals are different than these hospitals. We are now talking about what we ordinarily know as the Maritime hospitals?

Dr. NELSON. The Marine hospitals.

Senator HILL. Yes; that is right.

Are there any other questions on that, Senator Dworshak?

Senator DWORSHAK. No.

USE OF ADDITIONAL FUNDS

Senator HILL. Then you might go ahead and give us a picture of how you would use these additional funds between the $51 million and the $44,309,000.

Dr. NELSON. There is $1,032,000 for equipment, and we have a large backlog of equipment to replace, which was pointed out by these surveyors; and $483,700 in linens and rubber goods and all of the other many items with which I know you are all so familiar which are necessary in hospitals, and $174,000 for other nonpersonal emergency service costs that come up from time to time in the hospitals.

Four hundred and fifteen thousand dollars and 50 positions for training. In my statement, Mr. Chairman, I referred to the great importance of training our men to keep up with the rapid advances that are being made in medicine today and the great need to hold the interest of our doctors and provide first class quality medical care in our hospitals.

Sixty thousand dollars, was for research, with 10 positions. What we were attempting to do with these increased positions was to fill the gaps that we have in our program. For instance, in certain of our hospitals we do not have occupational therapy departments. Occupational therapy is most important in rehabilitating our patients to go back to their jobs. Without occupational therapy, their period of hospitalization is longer and they are not educated, when they have certain injuries resulting in deformities, as to how they can still get back into the swing of their ordinary work.

IMPORTANCE OF SOCIAL SERVICE

Social service, which is very important, does not exist in some of our hospitals.

Senator HILL. Now as to social service, you had better define that a little more in detail for Senator Dworshak and myself.

Dr. NELSON. Social service is that function which meets the needs of a patient who is ill, insofar as his family is concerned. He has worries. Worry can adversely influence his recovery. The social service worker takes account of his problems, takes the worry off of his shoulders as to how his family is going to be supported, learns of various ways that the family may be taken care of while he is in the hospital and also where he may turn when he gets out.

It is a very important function in all the hospitals today. Voluntary hospitals have large social service departments today.

Also, as far as the psychiatric cases are concerned, the social service worker is a very important helper to the doctor. He or she goes out into the community and learns various things about how the patient has been behaving, what he has done, which gives the physician the opportunity to better plan his treatment.

Dr. LOWRY. Senator Hill, if I may, I would like to give you an illustration of the problem we have with a patient who has a mental illness. We have a patient who has had a mental illness, and he is recovering. A social worker is a person who can go out to try to locate a job that he can handle with his mental disability as it exists at the time, and then, too, this person tries to arrange for a place for him to live so he can be moved out of the hospital and continue with his recovery.

Now this is also true of patients who originally needed hospitalization but now need only care. These social workers can move the patient out of the hospital by arranging for some other appropriate kind of care.

EQUIPMENT FUNDS

Now I would like to cite, if I may, an example of the situation that we have with regard to equipment funds. The situation is at one of our hospitals, in fact, the Staten Island Hospital in New York, where we have a training program for dieticians. These are young, competent people, and we are trying to train them to do a good job. They are using equipment that is actually older than the students and teachers. We find it rather difficult to try to train them in modern methods when we are using antique equipment.

I just cite that as a specific example of equipment needs.

Dr. NELSON. Mr. Chairman, continuing the reduction, I would like to enumerate other items that were affected.

Senator HILL. All right, proceed.

OUTPATIENT PERSONNEL AND HOSPITALIZATION REDUCTIONS

Dr. NELSON. In our outpatient clinics and offices, there was a reduction of $530,000 and 50 positions. You will remember I just stated that our large outpatient load is continuing the same.

Senator HILL. It is more economical to treat a patient in an outpatient clinic rather than where you have to bring the patient in and put him in a bed, is that right?

Dr. NELSON. That is right, Mr. Chairman.

Also, there was a reduction in Federal hospitalization of $132,300. This reduction is predicated on the maritime statistics that I quoted and on our projected patient load.

As you know, Mr. Chairman, if a seaman becomes ill with an emergency condition and requires immediate hospitalization where we have no hospital, we hospitalize him under contract in a voluntary hospital and then move him to one of our hospitals as soon as possible.

With a projected reduction we anticipate, that is, in the overall seamen category, that there will be a reduction in that.

Also, covered in this reduction are $53,000 and 5 positions for training our people in the progress in outpatient medicine.

In health units, a reduction of $89,000 and 13 positions. Of course, this is a reimbursable item within our appropriation, but there was a projected expansion of the Federal health program.

CUTS IN COAST GUARD SALARY FUNDS

In the Coast Guard, there was a reduction of $116,000, consisting primarily of an adjustment of about $52,200 in average salaries. This projects the assignment of lower ranking medical officers through retirements, resignations, and certain other factors, to these vacancies, rather than the ranks we are carrying at the present time.

Senator HILL. You mean that when you have a vacancy due to retirement or resignation, that instead of filling that vacancy with an officer of the rank of the party who is leaving the vacancy, you fill the vacancy with an officer of a lower rank, and that will save that much on salary?

Dr. NELSON. That is correct, Mr. Chairman.

Then, also included in this same amount is about $42,800 in services in outlying stations of the Coast Guard which were handled by designated positions under contract. There has been some movement in these areas, and also through the Medical Care Act and its provisions for cross utilization, we are able to have some of these examinations done by the Army and the Navy and Air Corps who have units in these areas. On an outpatient examination basis there is not a reimbursement of funds, only when hospitalization is involved.

Senator HILL. In other words, where the Army, or Navy, or Air Force examines one of your men for you, you do not have to pay for that examination?

Dr. NELSON. That is right, and by the same token, where we do that for them, they do not have to pay.

Senator HILL. When you reciprocate, you do not charge them anything?

Dr. NELSON. That is right.

OTHER CUTS AFFECTING PERSONNEL

Then, there was a reduction of $1 million in nursing grants.

Senator HILL. Nursing grants?

Dr. NELSON. That is the item on which Mrs. Adams addressed you.

There was a reduction of $41,000 and 4 positions for the Public Health Service officers, which are carried in this appropriation. This money and these positions were transferred from our appropriation to the Bureau of State Services. These were four people detailed to the Office of Vocational Rehabilitation, and it was determined that that program better belonged in the Bureau of State Services than the Bureau of Medical Services.

There was an increase of $658,000 in projected dependents' medical care.

No change was requested for payments to Hawaii for care of patients with leprosy.

Finally, there was a reduction of $258,000 and 46 positions in the administration of the program.

I would like to emphasize that one of our major concerns in this total reduction was the amount of money for training and research which we feel is so vitally important in modern medical care to attract our men and to hold these men and to make them competent to carry on this program and improve the quality of care in our hospitals.

Senator HILL. Is there anything else there, Doctor?

Dr. NELSON. I think that covers it, Mr. Chairman.

Senator HILL. Is there anything you would like to add?

Dr. LOWRY. No, thank you.

Senator HILL. Is there any other illustration of your needs that you might want to cover?

EQUIPMENT NEEDED

Dr. NELSON. I might say that I should detail some of our equipment that we are badly in need of, Mr. Chairman, such as our autoclaves, sterilizers, audiometers for testing hearing, and new electrocardiograph equipment, which is so important in the proper handling of heart disease, operating tables, instruments, hospital furniture, microscopes in the laboratory, kitchen equipment, steamtables, baking ovens, right down the gamut; these are only some of the things that are worn out.

Our youngest hospital was built in 1940, and a good share of the equipment that is in our hospitals today is original equipment and it is pretty well battered.

Senator HILL. Well, the truth is, that we have not made available funds to keep up the equipment in your hospitals; is that not true?

Dr. NELSON. That is right, Mr. Chairman.

Senator HILL. Just as you have a need for additional funds for your personnel, you also have a need for additional funds for equipment and certain renovations and modernization of your facilities; is that right?

Dr. NELSON. That is very true. I just remarked that our youngest hospital was built in 1940. According to the needs of hospitals in those days as compared with the present, we have a great need for renovation and modernization changes, and new facilities.

PROGRAM ANTICIPATED UNDER DISALLOWED FUNDS

Senator HILL. Suppose you supply for the record an itemization in detail of what you proposed to do with the funds disallowed, the difference between your original request, $51 million, and the budget estimate, $44,309,000, a total of $6,691,000. You have commented in general upon what you requested the funds for, but give us an itemization.

(The material referred to follows:)

HOSPITALS AND MEDICAL CARE

History of 1959 estimates

Activity	1959 Public Health Service request	Reduction by Department	1959 Department's request	Reductions by Bureau of the Budget	1959 President's budget	Total reductions
1. Operation of hospitals	$39, 539, 000	$1, 795, 000	$37, 744, 000	$2, 882, 000	$34, 862, 000	$4, 677, 000
2. Operation of outpatient clinics and offices	5, 194, 000	387, 000	4, 807, 000	107, 000	4, 700, 000	494, 000
3. Operation of health units	591, 000	43, 000	548, 000	45, 000	503, 000	88, 000
4. Coast Guard medical services	1, 283, 000	21, 000	1, 262, 000	95, 000	1, 167, 000	116, 000
5. Development and coordination of nursing resources	500, 000	108, 000	392, 000	31, 000	361, 000	139, 000
6. Nurse training grants	4, 000, 000	1, 000, 000	3, 000, 000	----------	3, 000, 000	1, 000, 000
7. Personnel detailed to other agencies	429, 000	----------	429, 000	41, 000	388, 000	41, 000
8. Dependents' medical care	1, 076, 000	[1] (132, 000)	1, 208, 000	[1] (658, 000)	1, 866, 000	[1](790, 000)
9. Payments to Hawaii	1, 000, 000	----------	1, 000, 000	----------	1, 000, 000	----------
10. Administration	1, 012, 000	221, 000	791, 000	----------	791, 000	221, 000
Total obligations	54, 624, 000	3, 443, 000	51, 181, 000	2, 543, 000	48, 638, 000	5, 986, 000
Less reimbursements	3, 624, 000	[1](557, 000)	4, 181, 000	[1](148, 000)	4, 329, 000	[1](705, 000)
Appropriation	51, 000, 000	4, 000, 000	47, 000, 000	2, 691, 000	44, 309, 000	6, 691, 000

[1] Increases are indicated by enclosure in parentheses.

Operation of hospitals

	Positions	Amount
Reductions in operations	475	$4, 202, 000
Medical, nursing, and other personnel	475	$2, 417, 000
Equipment	----------	1, 180, 000
Supplies and materials	----------	651, 900
Other items of expense	----------	+46, 900
Reductions in training	50	415, 000
Reductions in research	10	60, 000
Total reductions	535	4, 677, 000
By Department HEW	142	1, 795, 000
By Bureau of the Budget	393	2, 882, 000

The budget for the "Hospitals and medical care" activities of the Service was based on the premise that improvements were required so that minimally adequate medical care could be given to patients. Known deficiencies in the medical care have been highlighted by the 13 hospital surveys done by nongovernmental experts within the past 2 years. The request approved by the Public Health

Service was reduced by $1,795,000 by the Department of Health, Education, and Welfare, and reduced $2,882,000 further by the Bureau of the Budget. These funds would have been used to remedy some of the deficiencies in the kinds and quantity of patient services and to improve the quality of services to patients. The steps which would have been taken but have had to be held in abeyance because of the reduction are: improvements in direct services to patients, training to increase staff proficiency in caring for patients, and research to bring faster and better methods of diagnosis and treatment of patients.

One of the factors that determines the quantity and quality of patient care is the number of personnel on duty. The present ratio in PHS hospitals of 1.4 personnel per patient is about two-thirds of the ratio in nonprofit and voluntary general hospitals. This deficiency in staff makes it difficult to provide proper patient care. It is common practice in our hospitals to staff a ward of 50 patients with 1 nurse and 2 attendants between the house of 4 p. m. and midnight; and between midnight and 7 a. m. with 1 nurse and 1 attendant. The surveyor of the hospital in Norfolk, Va., noted the following: "There are serious deficiencies in nursing service. These are entirely due to inadequate numbers of trained personnel and substandard conditions in regard to consumable supplies and equipment, much of which is antiquated. We believe dangerous conditions exist, as was true the night of our visit when 1 professional nurse and 1 nursing assistant (although organization called for 2) were responsible for the care of 88 medical and ear, nose, and throat patients in 2 nursing units with a 99-bed capacity."

In these hospitals the shortage of physicians treating patients is highlighted by the following statement of the surveyor of our New Orleans, La., hospital: "The physicians try to render the best care possible, but hands are tied. Brief examination is done on each patient—they cannot do a physical workup, and consequently, pathology is missed. A typical day is 100 patients and 3 doctors to see them. (Up until 3 weeks ago there were only 2 doctors.) It boils down to giving medical attention to a given number of people by a given number of doctors in a given number of hours. A doctor sends out distress calls to chiefs of services when he is completely snowed under and they all 'pitch in' and help."

To give acceptable medical care, other categories of hospital personnel in addition to physicians and nurses are required. A typical comment on this situation from one of the survey reports is as follows: "Severe shortages exist in several areas. In general, the lack of adequate financial support was apparent in the 'ingrown character' of the staff, lack of training courses, multiple responsibilities regardless of classification, lack of adjunctive hospital services, and heavy use of consultative services. Some examples of problems are no clerical help in the nursing department, definite shortage of nursing assistants, only 4 laborers to clean the entire hospital, night duty nurse must cover switchboard, and the lack of clerical help to perform paperwork for the medical staff."

At the psychiatric hospital in Fort Worth the level of patient care was so inadequate because of staff shortages that the hospital failed to get accredited by the American Psychiatric Association. It has been placed on "conditional approval." The surveyor reported that "a total of 101 positions was indicated as necessary to bring staffing to an acceptable level. Department after department needs additional employees for proper staff support. Almost every category of professional skill is in short supply, and many administrative and supporting functions are short of staff."

The reductions that were made by the Department were 118 positions and $710,900, in addition the Bureau of the Budget eliminated 357 positions and $1,706,100. With this additional staff many of the deficiencies, of which examples have been given, could be remedied.

Proper and modern equipment is most necessary to provide adequate patient care. Funds to replace wornout and obsolete equipment, and to provide the new and modern equipment necessary for current methods of treatment have been very limited for many years. A typical comment from the Detroit hospital survey underlines this situation: "One piece of equipment, which is the urological table, is so old that it is almost a museum piece. This equipment should definitely be replaced since under the present system retrograde pyelograms force patients to be transported from the operating room to the X-ray department with catheters, and possibly even cystoscopes in place. This is both unnecessary and dangerous." Shortages of equipment exist in all areas in the hospitals. This is shown by the following excerpt from the report on the Seattle hospital: "Not enough money is provided annually for equipment in this hospital. This explains

the antiquated state of equipment in this hospital. * * * Basic dietary equipment is worn and obsolete, equipment for use of patients is outdated in appearance and function, other patients room furniture is extremely old and limited, laundry washers and extractors should be replaced, housekeeping equipment is mostly obsolete and insufficient in quantity, office machines are approaching the end of their useful life. * * * More funds should be made available for equipment replacements in this hospital. * * * Lack of adequate equipment funds has produced a situation causing marked increases in maintenance costs and inefficient use of labor because of antiquated equipment."

Radioisotopes are becoming a necessity in the practice of modern medicine for diagnosis and treatment. Because of lack of equipment the Staten Island Hospital is the only hospital that can use these modern aids to diagnose and treatment. In the Boston hospital the X-ray department has a modern high speed rotating anode X-ray tube and carrier in conjunction with an old-type, hand-operated X-ray table which was standard equipment before World War I.

The cost of needed equipment in the hospital exceeds $3 million. The $693,000 deleted by the Department and the additional $487,000 reduction by the Bureau of the Budget greatly impede the establishment of a planned program of replacements.

The supply situations in these hospitals were pointed out by most surveyors to be badly deficient. The results of insufficient supply levels are a frustrating, inferior, and costly operation. The surveyor of the Baltimore, Md., hospital observed: "Pharmacy supply continues to be somewhat too restricted * * * inadequate supplies have forced the clinicians to use second therapeutic approaches." The survey of the Boston hospital reported: "The inventory possible within the budget is inadequate to effectively provide for patient needs. Red Cross emergency stock has on occasion been used to meet essential needs, essential pharmaceuticals have had to be curtailed, dental and occupational therapy supplies are short, linen supply is short—these are examples of some of the problems in the supply area." In these hospitals a patient's bed can only be changed twice a week, except in the case of the critically ill or incontinent patient. To give patients the feeling of a fresh bed the bed linen is reversed each day when the bed is made up. On the days when fresh linen is utilized the nurse's time is often wasted awaiting the arrival of a fresh linen supply. In the hospital at Staten Island, the mattresses are 20 years old. They have been cleaned and repaired until they have reached the stage where they can hardly be made comfortable. It was planned to correct many of these discomforts and deficiencies and to improve patient care with the $651,900 requested for supplies of which $540,200 was eliminated by the Department, and $111,700 further reduced by the Bureau of the Budget.

A well-oriented and trained staff results in high-quality, efficient, and economical care. The best patient care is given when those responsible are skilled in the techniques being used and have the knowledge of the how and when to apply them. Because of the restricted numbers of personnel, new employees are given a cursory orientation to the hospital and put to work. They must learn their duties in the course of performing them with minimal instruction and supervision. With this very minimum number of personnel to carry out patient care, personnel cannot be taken off the job for training periods. Training outside the Service is necessary for some specialists. New knowledge on modern methods of patient care can be obtained through institutes, short university courses, and professional meetings. Funds are needed for costs of such training, and there must be sufficient personnel in the hospital to cover the workload while they are away.

A training program is necessary to provide specialists for the marine hospitals, for the Indian hospital program, and for other programs of the Public Health Service. Experience has demonstrated that it is almost impossible to recruit specialists so they must be developed in the Service from new and untrained recruits. To implement a minimum program of training which would increase staff proficiency in the care and treatment of patients, $415,000 including 50 positions was requested. With this reduction, $193,000 and 24 positions by the Department and $222,000 and 26 positions by the Bureau of the Budget, this training must be held in abeyance.

Research is a necessary part of any good hospital program. It improves the care of patients, develops new methods of diagnosis and treatment, and assists in recruiting and retaining good staff. Some outstanding research has been done in Public Health Service hospitals on syphilis, cancer, anesthesia, and in

other fields. About 60 scientific articles are published each year even though the work must be done with minimal funds. There are 93 research projects on file in the Division that could be done in these hospitals if funds were available for necessary equipment, supplies, and staff. These projects include research on cancer, heart disease, mental disease, surgical techniques, kidney function, vascular, and other diseases.

The importance of research to a good medical-care program in a hospital is pointed out in the surveyor's report on the Boston hospital: "There are three fundamental considerations relative to the staff of the medical service or, for that matter, of any service in the hospital. These are the quality of patient care, the effectiveness of the training program, and the opportunity for the stimulation and capacity for intellectual growth which is afforded through participation in research. * * * In view of the present minimal staffing and lack of financial resources, opportunities for research are effectively restrained except under unusual circumstances. Yet training in research represents an essential and integral factor in fostering and maintaining a high quality of patient care."

The budget request carried $60,000 including 10 positions, to implement a minimal research program in our hospitals. The reduction by the Bureau of the Budget deleted the research program as planned; but the House subcommittee, recognizing the importance of research in medical programs, placed $91,000 in the budget for research on leprosy at the Carville hospital.

The need for improving patient treatment in the Public Health Service hospitals can be characterized by the following paragraph from the report on the hospital at New Orleans after a study by—

Frank R. Bradley, M. D., director of Barnes Hospital Medical Center and Washington University clinics;

Harry E. Panhorst, associate director of Barnes Hospital in charge of the outpatient department;

Carl A. Moyer, M. D., surgeon in chief of Barnes Hospital and professor of surgery at Washington University School of Medicine;

Edward H. Reinhard, M. D., associate professor of medicine at Washington University School of Medicine;

Donald Horsh, associate director of Barnes Hospital; and

Ann J. Campbell, R. N., B. S., director of nursing service of Barnes Hospital.

"The team's conclusion is that the quality of medical care being offered at the New Orleans hospital does not compare favorably with the standard of care or the quality of care in other comparable Federal hospitals, including the veterans. Using another standard of measurement of the quality of medical care—that is, the quality possible in view of present-day knowledge of what adequate medical care consists of and the professional training, ability, and the desire of the professional staff in the New Orleans hospital and the Public Health Service as a whole—it is evident that the present staff of well-trained physicians are giving a lower quality of medical care than their training, ability, and desire makes possible. In some instances, the quality of care is so low that it is not only unsatisfactory from a professional standpoint but it is unsafe from the patient's standpoint. In other words, the fine professional staff members of this hospital are not able to realize their clinical potential, and while they are giving devoted service, are understandably frustrated."

The funds which were requested by the Public Health Service for improving patient care through direct services, better-trained personnel, and research and which were deleted subsequently totaled $4,677,000.

Operation of outpatient clinics and offices

	Positions	Amount
Reduction in operations:		
Medical, nursing, and other personnel	−40	−$305,200
Decrease in estimate for Federal hospitalization		−107,800
Other items of expense		−28,000
Reduction in training	−5	−53,000
Total reductions	−45	−494,000
By Department of Health, Education, and Welfare		387,000
By Bureau of Budget		107,000

As in the hospitals activity, acute shortages exist, principally in the personnel, equipment, and consultant service areas of the clinics activity. Due to the smaller size of the clinics, personnel shortages in many ways are more critical than in the hospitals, due to the reduced flexibility inherent in smaller numbers of staff. Insufficient numbers of doctors, nurses, and other personnel are too often required to rush through their duties, trying to do too much with too little manpower. Too often, patients cannot be, and are not, given the careful, meditated attention that is so vital to the provision of safe medical care. In fiscal year 1958, some recognition of the urgency that existed in the hospitals program was given, but little to the clinics program even though equally major deficiencies exist there. To determine them, a rigid station-by-station analysis of needs was made which indicated that a total of 45 additional personnel, and consultant services, and other increases totaling $375,000 were required to raise the present quality of medical care to an acceptable level. Funds were also requested to provide a post-graduate training program of 1-year studies for 4 dental officers and 1 nurse officer, and workshops for other nurses, costing a total of $53,000. As in the hospitals activity, this is considered necessary to increase the competencies and usefulness of the staff in providing better patient care and for keeping abreast of changes and advances in the field of medicine.

The reductions eliminated the proposed improvements enumerated above. These reductions give effect to an increase of $40,000 for the transfer to this appropriaiotn of the cutpatient clinic at Atlanta. There is a reduction of $47,000 for communicable disease center activities to reflect the changes in funding, as proposed by the Department of Health, Education, and Welfare.

Operation of health units

	Positions	Amount
Total reduction	14	$88,000
By Department of Health, Education, and Welfare	8	43,000
By Bureau of the Budget	6	45,000

The request for 12 positions to establish health units at 11 of our hospitals (civilian employees are not entitled to "health unit" services at the hospitals) and the proposal to increase by 2 positions the current staff of 3 employees assigned to the health units in the Health, Education, and Welfare buildings in Washington, in order to meet the Public Health Service's share of the operating costs, were disapproved.

Coast Guard medical services

	Positions	Amount
Total reduction	0	$116,000
By Department of Health, Education, and Welfare	0	21,000
By Bureau of the Budget	0	95,000

A reduction of $52,200 was made in personal services without a decrease in positions, for the purpose of adjusting the average salary to reflect replacements by lower salaried officers in 1959. Other requests refused were (*a*) $10,000 to defray the cost of physical examinations for Inactive Reserve personnel when called to active-duty training and when such examinations are not procurable from Public Health Service or Department of Defense facilities; and (*b*) $15,000 for meeting the cost of nonemergency medical care of coastguardsmen located at isolated points of duty; (*c*) $21,600 for supplies, materials, and equipment.

Development and coordination of nursing resources

	Positions	Amount
Reduction in program operations including personal services and other objects	19	$108,000
Reduction in expenses for the professional nurse traineeship evaluation conference	3	31,000
Total reduction	22	139,000
By Department of Health, Education, and Welfare		108,000
By Bureau of Budget		31,000

The preliminary estimate for the Division of Nursing Resources was geared toward completion of projects already underway and to apply findings from previous studies for the improvement of nursing care of patients.

These projects are:

1. Better use of nursing personnel in the small hospital, nursing homes, and in hospitals for the chronically ill.
2. How many nurses are really needed.
3. Why nurses leave their jobs.
4. Why qualified students leave nursing.
5. Student nurse understanding of patients.
6. Improving care in hospitals.
7. Consultation services.
8. Application of study and research.
9. Administration of nurse-training grants.
10. Traineeship evaluation conference.

This estimate of $500,000 and 70 positions was reduced by the Department to $392,000 and 51 positions. This meant an overall reduction in the above projects and a postponement of some projects and delays in completion of others. For example, the assignment in fiscal year 1957 of a nurse consultant to a PHS regional office proved so valuable in helping local hospitals and communities improve their nursing services that the Division felt it would be highly advantageous to assign field consultants to five other PHS regions. Results have already shown that this is the fastest method of achieving action toward helping patients more effectively. This project was completely eliminated by the reduction in funds.

The $50,000 estimated cost of the professional nurse traineeship evaluation conference was reduced to $19,000 by the Bureau of the Budget, resulting in the elimination of the 3 additional positions and other necessary expenses for planning and preparation for the conference. Therefore, any cost for these purposes will have to be absorbed within the Division of Nursing Resources basic program, thus again limiting the scope of the ongoing projects.

Nurse-training grants

	Amount
Reduction by the Department for professional nurse traineeships	$1,000,000

The original request for this activity was $4 million. This request was reduced by the Department to $3 million. This means that the additional 270 traineeships which the increase of $1 million will support would be eliminated at a time when the national need for qualified nurse teachers, administrators, and supervisors is so acute. It should also be pointed out that the $3 million will support only 800 traineeships when 1,700 qualified applicants are eligible.

Personnel detailed to other agencies

	Positions	Amount
Total reduction	4	$41,000
By Department of Health, Education, and Welfare	0	0
By Bureau of the Budget	4	41,000

This is a wholly reimbursable activity. The decrease of $41,000 and 4 positions involves the transfer to another part of the Public Health Service of the responsibility for the detail of 4 employees.

Dependents' medical care

Total addition	$790,000
By Department of Health, Education, and Welfare	132,000
By Bureau of the Budget	658,000

The Bureau of the Budget provided an increase to meet expected additional costs of the dependents' medical care program in 1959.

Administration

	Positions	Amount
Total reductions	46	$221,000
By Department of Health, Education, and Welfare	46	221,000
By Bureau of the Budget	0	0

The decrease of $221,000 reflects the elimination of the proposal for expanding the Federal employee health program, 27 positions and $121,000. This would have included additional personnel for (1) rendering consultative services to other Federal agencies desiring to establish health units and (2) establishing a central registry on Federal employee health units.

The decrease also eliminated a request for 19 positions and $100,000 for additional program support in the central office.

COMMUNICATION

Senator HILL. All right, Doctor, I am certainly much obliged to you gentlemen. Thank you very, very much.

I will put you in the record at this point following Dr. Nelson's testimony, a letter I have under date of April 15, 1958, from the Labor-Management Maritime Committee, signed by Mr. Earl W. Clark and Mr. Hoyt S. Haddock as codirectors. This letter deals with the needs of the marine hospitals.

(The letter referred to follows:)

LABOR-MANAGEMENT MARITIME COMMITTEE,
Washington, D. C., April 15, 1958.

Hon. LISTER HILL,
Chairman, Senate Labor and Public Welfare Committee.
Senator Office Building, Washington, D. C.

DEAR SENATOR HILL: For several years we have been urging additional funds for medical and hospital care in Public Health Service hospitals. We have believed that with increasing costs, the Service may eventually deteriorate to a substandard status unless adequate appropriations are provided.

Last year we addressed the House Appropriations Committee on this matter. We advised that the Public Health Service had called in administrative and medical experts in a number of their hospitals to make studies and recommendations. We suggested that the conclusions and recommendations of the experts be made available through the hearings of the House subcommittee. The facts were made available, and speak for themselves.

Able questioning by members of the House subcommittee brought out the fact that in all the hospitals surveyed, the experts confirmed that deficiencies and inadequacies existed. The Surgeon General in all candor stated, "We believe they are rapidly approaching the stage where we are close to giving substandard medical care to the beneficiaries of the Service." He further testified that an increase of $2 million would be required in fiscal year 1958, and an additional 4 or 5 million dollars at least, for the 1959 fiscal year to bring the hospitals up to date. Such funds relate to operation of hospitals and out-patient clinics and

offices, and do not include the replacement of wornout and inadequate buildings.

The House and Senate Appropriation Committees very wisely provided the $2 million requested for the 1958 fiscal year, and the Congress approved. However, we note that the budget recommendation for the 1959 fiscal year not only eliminates any added funds for operation of hospitals and outpatient clinics and offices, but reduces the request by $217,500 for direct obligations under that shown for 1958. Actually, were it not for possible reimbursable funds for hospital operations, there would be $850,000 less funds for the above items in 1959 than in 1958. This is disappointing at a time when some real progress is being made in improving the hospital service.

We hope your committee will provide sufficient funds to make effective the Surgeon General's recommendations of last year. In this way the work which your committee so ably advanced last year can be brought to fruition.

Several pertinent facts were brought out in the hearings of the Public Health Service before the House Subcommittee on Appropriations this year. For example, page 17 of the hearings indicates that the Public Health Service was not authorized to ask for the 4 to 5 million dollars additional which the Surgeon General said was needed for the 1959 fiscal year. On questioning, Dr. Burney revealed that the 1959 budget request will not provide the services that an independent group of experts found necessary to avoid the Public Health Service providing substandard medical care. On further questioning, Dr. Burney again revealed that 4 to 5 million dollars additional would be required in the 1959 budget to meet minimum medical and hospital care requirements.

It is our considered judgment, based upon reviews which we have made of hospitals during the last 12 months, that the 4 to 5 million dollars is needed to meet all the existing needs of the Public Health Service.

As a part of the antirecession drive the administration has started pushing several programs of construction. One of these is a $2 billion construction for post offices. We are not familiar with the need of new buildings for the Post Office Department. However, we think it reasonable to assume that their needs may be no more pressing than those of the Public Health Service, a service where sick people must be housed and treated. Our review of Public Health Service facilities has revealed that the most modern hospital built for the Public Health Service is now more than 25 years of age. It is clear to us that the United States Public Health Service will never have adequate facilities or funds to perform its work until Congress takes the appropriate measures to provide that agency with the funds necessary to carry out its full responsibilities under existing laws. Modernization of plant should be considered an essential element in this program.

Our review of six Public Health Service facilities did not reveal a single research project being conducted in these vital facilities. For example, in the facility at Fort Worth, Tex., we noted that the hospital does not have a research program to study patients, nor an education program designed to utilize the facilities and opportunities for training doctors, technicians, and nurses. This appeared to us to be a serious deficiency. It does not seem reasonable that a hospital of this type and size should not be making a contribution to the development of treatment techniques for addicts and other mentally disturbed patients. We believe the great shortages which exist among doctors, nurses, and technicians in this field will never be filled without the development of a strong program utilizing United States Public Health Service facilities. Unless some action is taken, full use of the facilities and opportunities for this purpose may be irrevocably lost to the public.

Your great experience in the field of health legislation and your intimate knowledge of the Public Health Service programs have undoubtedly convinced you that hospital and medical care improvements are directly related to research and training which is conducted in connection with the Service. We believe, therefore, that funds for plant modernization, training, and research in the Public Health Service program should be provided.

We want to strongly urge that your committee appropriate sufficient funds this year to—

1. Provide adequately for the needed medical and hospital care as shown by the independent studies which Public Health had made of its facilities;
2. Modernize present facilities where needed through construction and alteration; and
3. Provide for essential research and training.

We appreciate the opportunity of submitting this letter to you and your committee.

Respectfully,

EARL W. CLARK,
HOYT S. HADDOCK,
Codirectors.

LETTER FROM SENATOR JACKSON

Senator HILL. I also have a letter from Senator Jackson regarding the training of public health personnel and the training of nursing personnel about which we have just heard testimony. Senator Jackson's letter will be made a part of the record at this point.

(The letter referred to follows:)

UNITED STATES SENATE,
COMMITTEE ON ARMED SERVICES,
April 10, 1958.

HON. CARL HAYDEN,
Chairman, Committee on Appropriations,
United States Senate, Washington, D. C.

MY DEAR MR. CHAIRMAN: The Washington State Nurses' Association has rather forcefully brought to my attention the expanding needs for nursing in the country and the justification for the request of the American Nurses' Association for the following increases in departmental budget requests:

(1) An increase of from $2 million to $5 million for title I of the Health Amendments Act of 1956 for traineeship for public health personnel; and

(2) An increase of from $3 million to $7 million for title II for advance preparation of teachers, supervisors, and nursing service administrators.

I am confident that you are keenly aware of the needs in nursing education today to prepare professional nurses for leadership positions in nursing, particularly in teaching, supervision, nursing service administration, and public health nursing.

Warmest personal regards.

Sincerely yours,

HENRY M. JACKSON,
United States Senator.

LETTER FROM FLORIDA NURSES ASSOCIATION

Senator HILL. I also have a letter from Miss Vivian M. Duxbury, president, Florida Nurses Association, regarding the training of nurses and public health personnel, which will appear at this point in the record.

(The letter referred to follows:)

FLORIDA NURSES ASSOCIATION,
Orlando, Fla., April 15, 1958.

HON. LISTER HILL,
United States Senate,
Washington, D. C.

DEAR SENATOR HILL: On behalf of the more than 4,500 members of the Florida Nurses Association we are urgently soliciting your support on H. R. 11645 which provides for the traineeship programs for persons in public health (title I) and administration, supervision, and teaching in nursing (title II).

We were quite dismayed to learn that no increases were made in the appropriations by the House of Representatives, particularly when we realize the very critical need for an increase in the numbers of well-qualified health personnel. As you know, the constantly increasing demands in the nursing profession

are brought about by the growing population, the increase in the number of the aged, the expanding health services and facilities—especially hospitals—all of which would demand that Congress place a high priority on providing financial aid to increase the number of qualified nursing personnel for hospitals and public health agencies.

While Public Law 911 is already providing full traineeships for some Florida nurses, as well as some funds for practical nurse training, we believe there is still need for more assistance in this area in order to provide more and better qualified nursing personnel in this State.

We appreciate your continued interest in and support of this program in order to help us solve some of the problems in this country's shortage of nurses.

Sincerely yours,

VIVIAN M. DUXBURY, *President.*

FOREIGN QUARANTINE ACTIVITIES

STATEMENT OF DR. ANDREW P. SACKETT, CHIEF, DIVISION OF FOREIGN QUARANTINE, ACCOMPANIED BY DR. JAMES V. LOWRY, ACTING CHIEF, BUREAU OF MEDICAL SERVICES; DR. LEROY E. BURNEY, SURGEON GENERAL; AND JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

"Foreign Quarantine Activities

"[Foreign quarantine service:] For carrying out the purposes of sections 361 to 369 of the Act, relating to preventing the introduction of communicable diseases from foreign countries, the medical examination of aliens in accordance with section 325 of the Act, and the care and treatment of quarantine detainees pursuant to section 322 (e) of the Act in private or other public hospitals when facilities of the Public Health Service are not available, including insurance of official motor vehicles in foreign countries when required by law of such countries, [$3,876,000] *$3,983,000.*"

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate	$3,876,000	$3,983,000	$3,983,000

Obligations by activities

Activity	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
Examination of aliens and quarantine inspections at United States ports	505	$3,064,000	505	$3,171,000	505	$3,171,000
Examination of visa applicants in foreign countries	73	583,000	73	583,000	73	583,000
Administration	35	229,000	35	229,000	35	229,000
Total obligations	613	3,876,000	613	3,983,000	613	3,983,000

Obligations by objects

	1958 appropriation	1959 budget estimate	1959 House allowance
Total number of permanent positions	613	613	613
Full-time equivalent of all other positions	5	5	5
Average number of all employees	551	555	555
Number of employees at end of year	576	576	576
01 Personal services:			
Permanent positions	$2,905,000	$2,993,200	$2,993,200
Positions other than permanent	41,100	41,100	41,100
Other personal services	248,900	248,900	248,900
Total personal services	3,195,000	3,283,200	3,283,200
02 Travel	117,000	117,000	117,000
03 Transportation of things	43,900	43,900	43,900
04 Communication services	29,200	29,200	29,200
05 Rents and utility services	37,100	37,100	37,100
06 Printing and reproduction	9,300	9,300	9,300
07 Other contractual services	180,000	191,500	191,500
08 Supplies and materials	123,300	123,300	123,300
09 Equipment	29,600	29,100	29,100
11 Grants, subsidies, and contributions	136,000	143,800	143,800
15 Taxes and assessments	9,600	9,600	9,600
Subtotal	3,910,000	4,017,000	4,017,000
Deduct quarters and subsistence charges	34,000	34,000	34,000
Total obligations	3,876,000	3,983,000	3,983,000

Summary of changes

	Positions	Amount
1958 actual appropriation	613	$3,876,000
1959 appropriation request	613	3,983,000
Net change requested	0	+107,000

	1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount
Increases: For mandatory items: Retirement contributions annualization:				
For positions new in 1958	0	$3,100	0	$3,100
For full year cost (additional pay period)	0	4,200	0	4,200
Annualization costs of programs begun in 1958:				
Control of yellow fever	0	70,400	0	70,400
Extension of airport coverage	0	15,500	0	15,500
Increase in unit cost of contract physicians	0	11,500	0	11,500
Increased cost of incentive pay for 1 year's additional service for medical officers on duty in 1958	0	2,300	0	2,300
Total change requested	0	107,000	0	107,000

PREPARED STATEMENT

Senator HILL. Dr. Sackett, we are very happy to have you with us. You may proceed in your own way. If you have a statement, you may file it for the record and give us a summarization if you like.

Dr. SACKETT. Thank you, sir.

We have submitted a formal statement for the record which I would like to summarize.

Senator HILL. All right, your formal statement will be put in the record at this point.

(The statement referred to follows:)

Statement of Chief, Division of Foreign Quarantine

PURPOSES OF THE PROGRAM

Mr. Chairman and members of the committee, foreign quarantine is a highly specialized program of public health and preventive medicine directed to the purpose of minimizing and when possible preventing the introduction of quarantinable and other dangerous contagious diseases into the United States. Examination of immigrants is conducted to preclude not only the needless introduction of infectious diseases but also the entrance of individuals who will be an economic burden because of physical or mental handicaps.

CHANGING CONDITIONS AFFECTING THE PROGRAM

Some countries with which we now have direct commercial relationship possess a newly acquired independence. At this time they have yet to accomplish fully developed national health organizations capable of control of the native diseases which in certain instances are of the catastrophic epidemic type. Many countries in the world have a far greater incidence of serious infectious diseases than now occurs in the United States.

The increasing air traffic has created various new problems. Large numbers of planes arrive in this country daily, having stopped in many foreign countries for passengers and fuel en route. This increases the opportunity for vectors of diseases, such as mosquitoes, to hitchhike a ride to this country and to establish themselves as a part of our fauna. The development of passenger-carrying jet aircraft will make more difficult the provision of defense against the introduction of diseases into the United States.

Insect vectors of disease may be brought readily by surface vessels to ports in the United States from ports in Central and South America, and Africa. These United States ports are on the South Atlantic, gulf, and California coasts. Yellow fever in jungles of Central and South America periodically and unpredictably invades cities or towns servicing international traffic. The increasing commerce with ports in Africa where yellow fever, malaria, sleeping sickness, and virus encephalitides exist in nearby jungle reservoirs makes it imperative to control possible transportation of the dangerous insect vectors such as *Aedes simpsoni*, *Anopheles gambiae*, the tsetse fly, and others.

Both highway and railroad networks are being extended through Mexico and Central America. Certain of these extensions will reach into known areas of yellow fever and other dangerous diseases. Thus humans with these diseases in the incubation period and infected vectors may be brought into the United States by land traffic. The accessibility to travelers of such previously remote areas, afforded by this new transportation network, greatly increases the potential for importation of yellow fever and other endemic diseases.

Data from many reporting sources are assembled daily, interpreted, and integrated, so as to provide each quarantine station with accurate disease information each week and with special reports of sudden outbreaks of epidemic diseases.

WORLD PREVALENCE OF DISEASE

During the current fiscal year the country continued to remain free from the catastrophic epidemic diseases, except for one fatal case of plague in September 1957 in Wichita Falls, Tex.

Yellow fever established itself on the Mexican-Guatemalan border area within the past year. This northern extension of yellow fever overland, through the rain forests and jungles, poses a serious threat to the United States. In former years, the introduction of yellow fever into the United States was via surface shipping. The development of air travel and transportation affords a second possible route of entrance. The northward extension of yellow fever through Central America and the southward extension of road networks into this area now offer a third route of entrance of yellow fever—namely overland.

Smallpox has occurred in epidemic form in all continents except North America and Australia. The disease was introduced into 17 countries through international travel and traffic within the past year. It remains a serious and very dangerous health hazard to this country. The smallpox vacination requirement for citizens and aliens entering the United States is an essential measure to minimize the chance of introduction of the disease into the United States.

The continuing occurrence of cholera in epidemic form in the Orient requires constant awareness of this disease in international traffic and commerce.

Plague, "louse borne" relapsing fever, and epidemic typhus have not been a serious problem to international traffic. The strict adherence to requirements on ships and port areas for elimination of rats is the basic safeguard to keep plague under control. "Louse borne" relapsing fever and epidemic typhus had limited occurrence, largely in certain areas of Africa; cases of epidemic typhus in Mexico and South America have been reported.

YELLOW FEVER CONTROL PROGRAM

Yellow fever in man and animals in Central and South America continues to be a threat to the United States, particularly the Southern and Southwestern States, Puerto Rico, and the Virgin Islands. In these areas, and in Hawaii and Wake Island of the Pacific, the common urban mosquito transmitter of yellow fever, *Aedes aegypti*, is prevalent.

In this yellow fever receptive area, there is a human population highly susceptible to yellow fever and there is also a potential animal reservoir where the virus could incubate.

In addition, the jungle-type mosquito, *Haemagogus equinus*, a suspected vector of yellow fever in Central America, is present in limited number in Texas, where it has been collected from its tree-hole habitat on several occasions during the past 2 years.

In view of the very real hazard of introduction of yellow fever into the United States through travelers, infected animals, or otherwise in air, sea, or land traffic, work was undertaken in fiscal year 1958, as a joint effort of the Foreign Quarantine Division and the Communicable Disease Center of the Public Health Service, to determine the actual nature and extent of the yellow-fever problem in this country and methods and expenditures necessary to reduce drastically or possibly to eliminate this threat to the health and economy of the United States.

The work now in progress is as follows:

(1) Detection and control of the yellow fever vector, *Aedes aegypti*, in international airports and dock areas and at land entry points;

(2) Determination of the extent and intensity of *Aedes aegypti* breeding in the yellow fever receptive area;

(3) Ascertaining the type and importance of animal reservoirs which could serve as an incubator of the virus in nature; and

(4) Carrying on pilot studies to learn the most effective means of eradicating *Aedes aegypti* from the United States.

During the year the yellow fever mosquito, *Aedes aegypti*, was found breed- This finding was particularly significant in view of the fact that *Aedes aegypti* unit at our Miami quarantine station, on November 13, 1957, observed this species breeding in water contained in old tires at the main city dock in Key West. This find was particularly significant in view of the fact that *Aedes aegypti* has been absent from Key West since its eradication from that island in 1948. The local health authorities requested cooperation of our Miami entomological unit in undertaking a survey to determine the distribution of this mosquito in Key West. The species, unfortunately, was found widely distributed in a large part of the city.

The reappearance of this mosquito in Key West points up the importance of maintaining a surveillance and control program if the occurrence of potentially serious health hazards such as this are to be prevented.

The Communicable Disease Center has conducted surveys in 38 communities (other than at airports and docks) in the yellow fever receiptive area during this fiscal year in cooperation with State and local health departments. A total of 17 communities had *Aedes aegypti* breeding with indices varying from 1.0 to 52.6 percent of premises surveyed. Additional surveys are planned in approximately 40 communities, with particular attention being given to cities located in the marginal areas along the northern limits of the yellow fever receptive area.

A pilot study is in operation at Pensacola, Fla., to demonstrate the eradication of *Aedes aegypti*. This project will provide means of studying the costs and methodology of eradication of the yellow fever mosquito in comparable urban areas in the United States. Other phases of the overall yellow fever and control activities also are being given attention.

LEGISLATION AFFECTING THE FOREIGN QUARANTINE DIVISION

Under Public Law 58 of the 85th Congress, the Third Supplemental Appropriation Act, dated June 21, 1957, the Division of Foreign Quarantine is providing 24-hour boarding of ships and aircraft. Overtime services are provided at the carrier's request and on a reimbursable basis to the Government for vessels and nonexempt traffic.

Public Law 316 of the 85th Congress, the Immigration Act of 1957, effective September 11, 1957, amends in various respects the Immigration and Nationality Act. Provisions of this new law permit the issuance of approximately 80,000 visas estimated as follows: (1) 40,000 in the first 3 preference categories to aliens who are now separated from their families in the United States, (2) 18,656 resulting from unused numbers under the Refugee Relief Act to expellees and refugees from Iron Curtain countries, (3) 8,000 under the regular quotas resulting from cancellations of mortgages placed on quotas during the operation of the Displaced Persons Act, (4) 4,000 to orphans, and (5) 10,000 under the remaining sections of the act. Funds have been reprogramed into the foreign activity from the domestic activity in fiscal year 1958 to meet an increased workload of 23,600 examinations. This 1958 staffing level is continued in fiscal year 1959.

FUND REQUIREMENTS FOR 1959

The estimate for support of the activities of the Division of Foreign Quarantine for fiscal year 1959 is $3,983,000. This amount includes an increase of $107,000 above the appropriation of $3,876,000 for the fiscal year 1958. The increase is for the following mandatory items of expense:

To maintain on a full-year basis in 1959 the program level for a yellow-fever control and airport coverage approved by Congress for 1958	$85,900
To put on a full annual basis contributions to retirement fund	7,300
To continue the present level of fee-basis employment by increasing the unit rate for contract physicians by approximately 13 percent	11,500
To partially meet the increased cost of incentive pay for 1 year's additional service for medical officers on duty in 1958	2,300
Total	107,000

These funds are necessary to support the activities of the Division of Foreign Quarantine at 314 points in continental and insular United States, including 21 major stations, 156 minor and 137 subports, and 28 consulates overseas, as well as the headquarters operation.

EFFECT OF TRANSPORTATION ON DISEASE SPREAD

Dr. SACKETT. Mr. Chairman and members of the committee, foreign quarantine is a highly specialized program of public health and preventive medicine directed to minimizing and preventing the introduction of quarantinable and other dangerous diseases into the United States and the entrance of immigrants who will be an economic burden because of physical or mental handicaps.

The development of passenger-carrying jet aircraft will make more difficult the provisions of defense against the introduction of diseases into the United States. Travelers from remote areas can arrive at almost any point in this country within the incubation period of almost all infectious diseases. Increasing commerce with Africa permits insect vectors to be brought in by air and vessels from areas where yellow fever, malaria, sleeping sickness, and virus encephalitides exist. Some countries with which we now have direct commercial relationships are not yet able to control the dangerous infectious diseases. The extension of highway and railroad networks southward into Mexico and Central America now offers an additional route for the introduction of yellow fever into the United States.

During the current fiscal year, the country continued to remain free from the quarantinable diseases, except for one fatal case of

plague in September 1957. Plague, "louseborne" relapsing fever, and epidemic typhus have not been a serious problem to international traffic.

The continuing occurrence of cholera in epidemic form in the Orient requires constant awareness of this disease in international traffic and commerce. Smallpox has occurred in epidemic form in all continents except North America and Australia, and was introduced into 17 countries through international travel and traffic. The vaccination requirement for citizens and aliens entering the United States is an essential measure to minimize the chance of introduction of this very dangerous health hazard.

Senator HILL. In that connection, we have an agreement, I believe, with many other nations that a persons has to be vaccinated before he comes in, but I think the United States is about the only country really enforcing that agreement; is that not just about true?

Dr. SACKETT. Yes, sir.

Senator HILL. I have traveled some little bit, and I do not find, except when you get ready to come back to the United States, that these other countries make much inquiry as to whether or not you have been vaccinated. However, that is really not your problem, but your problem is to make sure they are vaccinated before they come into the United States, because you are the watchman for us. What these others do, we have no control over.

Dr. SACKETT. It is also significant, Senator, that we have had no smallpox for many years, and that many of these other countries have had it.

Senator HILL. We have not had any for several years?

Dr. SACKETT. Not since 1953.

Senator HILL. Is that your last case?

Dr. SACKETT. Yes, sir.

Senator HILL. Well, that is one illustration of what preventive medicine can do; is it not?

Dr. SACKETT. Yes.

Senator HILL. You are too young to remember what we called the pesthouses in all the different cities of any size where they sent the smallpox cases, but they are all gone now.

Dr. SACKETT. Yes, sir.

Senator HILL. That is due to this public-health work.

Dr. SACKETT. Yes.

WORK ON YELLOW FEVER

Yellow fever has moved northward during the current fiscal year through Central America and established itself on the Mexican-Guatemalan border. In view of the very real hazard of introduction of yellow fever into the United States, work was undertaken in fiscal year 1958, as a joint effort of the Foreign Quarantine Division and the Communicable Disease Center of the Public Health Service, to determine the actual nature and extent of the problem in this country and methods and costs to reduce or to eliminate this threat to the health and economy of the country.

On November 13, 1957, the entomological unit at our Miami Quarantine Station observed the yellow fever mosquito, *Aedes aegypti*, which is the principal vector of yellow fever breeding in water in old

tires at the main city dock in Key West, Fla., in which city this mosquito has been absent since its eradication in 1948.

Senator HILL. Doctor, is this a different mosquito from the stegomya mosquito? I notice you gave him a different name.

Dr. SACKETT. Yes, sir. The name has been changed some years ago.

Senator HILL. Well, is it about the same breed?

Dr. SACKETT. Yes, sir.

Our unit, at the request of the local health authorities, cooperated in a survey to determine the distribution of this mosquito in Key West. It was found to be widely distributed in a large part of the city.

The Communicable Disease Center conducted surveys in 38 communities—other than at airports and docks—in the yellow fever receptive area in cooperation with State and local health departments.

Additional surveys are planned in approximately 40 communities with particular attention to cities in the marginal areas along the northern limits of the yellow-fever receptive area. A pilot study is in operation at Pensacola, Fla., to study the costs and methodology of eradication of the yellow fever mosquito in comparable urban areas in the United States.

RECENT LEGISLATION AFFECTING QUARANTINE

Under Public Law 58 of the 85th Congress, the Third Supplemental Appropriation Act, dated June 21, 1957, the Division of Foreign Quarantine is providing 24-hour boarding of ships and aircraft. Overtime services are provided at the carrier's request on a reimbursable basis to the Government for vessels and nonexempt traffic.

Public Law 316 of the 85th Congress, the Immigration Act of 1957, effective September 11, 1957, amends in various respects the Immigration and Nationality Act, and permits the issuance of approximately 80,000 visas. Funds for 1958 have been reprogramed into the foreign activity from the domestic activity to meet an increased workload of 23,600 examinations.

The estimate of $3,983,000 is for the support of the activities of the Division of Foreign Quarantine for fiscal year 1959 at 314 points in continental and insular United States, 28 consulates overseas, and the headquarters operation.

This is $107,000 above the appropriation of $3,876,000 for fiscal year 1958. The increase is for the following mandatory items of expense: Annualization costs, $93,200; increase of 13 percent in unit rate for contract physicians, $11,500; and increased cost of incentive pay for 1 year's additional service for medical officers on duty in 1958, $2,300.

I will be glad to answer any questions you may have.

Senator HILL. Doctor, you asked for $5,500,000, did you not?

Dr. SACKETT. Yes, sir.

Senator HILL. The budget allowed you $3,983,000. The House gave you an increase of $107,000 over what you had last year; is that right?

Dr. SACKETT. Yes.

Senator HILL. Now what do you contemplate is the need for the additional, roughly $1,500,000 more? How are you going to use that?

Dr. SACKETT. Well, sir, the margin of difference to which you referred would provide for more complete coverage at the Mexican border. It would provide for more adequate staffing of international airports and would also provide for staffing at some new international airports that we anticipate will be in business in fiscal 1959.

It would provide for coverage of the St. Lawrence seaway. It would provide additional funds for the yellow fever control project. It includes major items of boat repair, provides for the establishment of stations for the examination of aliens in Mexico and in Manila, and provides for an expansion of headquarters activity. It also includes a training item for quarantine inspectors and the establishment of control laboratories.

CONTROL LABORATORIES

Senator HILL. The establishment of control laboratories, did you say?

Dr. SACKETT. Yes, sir.

Senator HILL. What would be the nature of those laboratories?

Dr. SACKETT. These laboratories, it was envisioned, would be located at our quarantine stations and would provide a scientific backstop for our quarantine inspectors so that specimens could be examined immediately and the diagnosis arrived at promptly.

Senator HILL. How many laboratories did you contemplate establishing?

Dr. SACKETT. This included five laboratories in the request to the Department. This type of specimen might be for a person who is ill aboard an arriving vessel, in which case, the possibilities would include smallpox, where it would be very valuable to be able to make a laboratory diagnosis promptly.

Senator HILL. Now without this laboratory at any particular place, how would you do it? Where would you have to send the specimen? What would you do?

Dr. SACKETT. Well, at present, we would take the specimen to the nearest available laboratory. In some coastal cities there are no laboratories which are available to perform this type of diagnostic test, so that we might experience some delay and inconvenience to the shipping company and the people aboard the ship, due to their being detained until a diagnosis is made.

Senator HILL. What, of the different items that you have given us in the breakdown, do you consider more needed than others?

Dr. SACKETT. I feel that our most urgent need operationally is to be able to give more adequate coverage at the international airports and to be able to provide coverage at the new airports that are being opened.

FUNDS FOR ST. LAWRENCE SEAWAY ACTIVITIES

Senator HILL. You mentioned the St. Lawrence River, too.

Dr. SACKETT. Yes. This is also in the same category.

Senator HILL. Are you not having more and more immigration there through the St. Lawrence?

Dr. SACKETT. Yes, sir. This canal, we are told, will be in operation in fiscal year 1959.

Senator HILL. What is the anticipated opening date of the seaway.

Dr. SACKETT. It is expected a 14-foot channel will be opened on

July 4 of this year; and in about April of next year, this will have been enlarged to 27 feet.

Senator HILL. But in this budget there is no provision for any funds to take care of the situation there that will come to pass when the canal is opened, is that correct?

Dr. SACKETT. That is correct.

Senator HILL. What was the amount of the funds for this extended coverage there?

Dr. LOWRY. Mr. Chairman, if I may, I think one of the problems we face is illustrated by what went on this year in the increase of the number of planes inspected—from 57,000 to 62,000 and the number of ships which increased from 30,000 to 35,000. Of course, along with this goes the rapidity of travel. Let us take smallpox with an incubation period of 10 to 14 days: A man can travel from a place where there is an epidemic to the United States in 2 or 3 days. As a matter of fact, such a thing happened during this past year. Of course, then you have the person arriving, and if his vaccination is ineffective, you have a problem because he is there and you do not know whether he is going to get the disease or not. That is one of the penalties we pay for the rapidity of travel.

Dr. SACKETT. In direct answer to your question, there would be 8 positions required at a cost of $38,000 for a station on the St. Lawrence seaway.

Senator HILL. What would be the highest ranking position if you get 8 people for $38,000. What will be the highest ranking position there?

Dr. SACKETT. Well, there would be 8 positions, and it would provide for 6.8 man-years, and the quarantine inspector position is a GS-9.

Senator HILL. What is that salary? What is the basic salary for a GS-9?

Dr. SACKETT. That would be $5,440.

Senator HILL. That is the beginning of the grade.

What was the figure you gave there, not for the St. Lawrence but for the overall coverage of the airports and any other places that should be covered?

Dr. SACKETT. For the Miami Airport we have 9 positions, $40,000; for the New York International Airport, 11 positions, $68,000; for the Los Angeles Airport, 2 positions, $10,000; staffing for other airports, 4 positions, $18,000.

Dr. LOWRY. Mr. Chairman, are you interested in the details or do you want us to submit this for the record?

Senator HILL. You can submit that for the record, the full picture.

Dr. SACKETT. Yes, sir.

Senator HILL. We want the picture as to needs, the amount of money and any comment you might see fit to make in reference to the needs for this additional protection.

Dr. SACKETT. Yes, sir.

Dr. LOWRY. I wonder if it was clear that Dr. Sackett was speaking about these eight positions only in relation to the St. Lawrence seaway?

Senator HILL. Well, it was to my mind, yes. That was definitely clear. You put in there, though, in your breakdown, the total number of positions where the increased coverage which you feel is needed today for protection. Give us the whole picture for the record.

(The information referred to follows:)

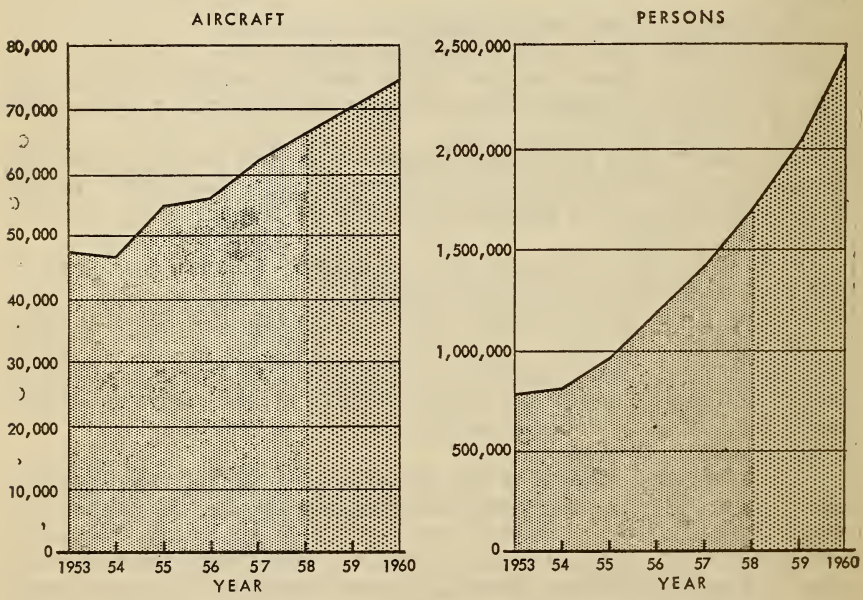
Urgent operational needs to provide coverage at all points of entry

	Number	Amount
1. International airports:		
(a) To provide for inspectional services at a 2d international airport facility in Miami	9	$40,000
(b) To provide for inspectional services at a new airport in Los Angeles	2	10,000
(c) To provide for the staffing of a 2d operational wing of the Idlewild International Airport in New York	11	68,000
(d) To provide for the increase in traffic at Honolulu and Houston	2	8,800
(e) To provide for the increase in traffic at Chicago and Dallas	2	9,200
2. St. Lawrence seaway: To provide for quarantine inspections of ships arriving from foreign ports and for the medical examinations of arriving aliens, when the St. Lawrence seaway is placed in operation during the fiscal year 1959	8	38,000
3. Mexican-border coverage:		
To provide for—		
(a) Additional medical and quarantine inspector staff to examine and inspect border crossers at entry points where the border is totally unguarded against the entry of possible epidemics or covered by quarantine inspectors for only a portion of the period during which these entry points are open for traffic	100	428,000
(b) Additional X-ray technicians, equipment, and supplies to screen persons with tuberculosis from among border crossers applying for the "crossing permit" issued by the Immigration and Naturalization Service to those individuals whose travel requirements necessitate frequent crossings at a particular point of entry; e. g., Juarez, Mexico, to El Paso, Tex	15	160,000
Total	149	762,000

Of the items that were cut out by the Department and the Bureau of the Budget, those listed above represent the most urgent operational needs to provide coverage at all points of entry. For example, the new airport at Miami which will open during fiscal year 1959 will require 9 additional inspectors. Funds in the budget submission are inadequate to do this. Both the old terminal and the new facility will continue to operate 24 hours a day.

The attached chart, airport quarantine inspection program, shows the increasing trend in number of aircraft and persons arriving by air inspected from 1953 to 1958 and estimated for the next 2 years.

AIRPORT QUARANTINE INSPECTION PROGRAM



Airport quarantine inspection program

Fiscal year	Aircraft	Persons	Fiscal year	Aircraft	Persons
1953	47,902	791,721	1957	61,892	1,440,590
1954	47,307	827,834	1958	[1] 66,018	[1] 1,728,708
1955	54,759	966,140	1959	[1] 70,800	[1] 2,074,450
1956	56,891	1,195,359	1960	[1] 75,114	[1] 2,489,340

[1] Projected estimate.

OVERTIME IN QUARANTINE PROGRAM

Senator HILL. Is there anything else you gentlemen would like to add?

I would like to ask just this final question: You gentlemen may recall we had quite a battle in the Congress last year over the provision that we put in the Third Supplemental Appropriation Act which aimed at placing foreign quarantine service on a basis more nearly conforming with the Immigration and Naturalization Service and the Customs Bureau with respect to the financing of overtime inspection work. How has that worked out? What has been the result?

Dr. SACKETT. Sir, the services had been provided since the day the law became effective. In implementation of the act, we drafted proposed regulations which brought up some substantial problems in interpretation. We had numerous discussions on these differences. It finally became apparent that a submittal ot the Comptroller General would be necessary. Such a submittal was drafted and sent forward.

In the meantime, we are operating under interim instructions, under provisions on which there is general agreement.

Senator HILL. Are your personnel getting their overtime pay for this overtime work just as these other agencies receive for their overtime?

Dr. SACKETT. No, sir. The interim instructions do not provide, for example, for the premium pay or standby pay which the inspectors of the other services receive.

Dr. LOWRY. Mr. Chairman, they are getting paid under these regulations, but the pay is not exactly equivalent.

Senator HILL. It is not comparable?

Dr. SACKETT. Yes, sir.

Mr. KELLY. I think it should be pointed out that even if the Comptroller General were to rule favorably on the questions which we had put before him, they still would not be paid at a rate which is commensurate with the rate paid in Immigrations and Customs. It would be more nearly commensurate with them, but the congressional act was not or did not authorize pay which is as great as in some instances is paid by other inspection agences.

Senator HILL. But they are not getting now that which the act did authorize?

QUESTION FOR COMPTROLLER GENERAL

Mr. KELLY. That is what we have asked the Comptroller General to determine. The question is whether or not the definition of overtime is the definition used by Immigration and Customs, which allows for a so-called rollback provision, or whether or not it is the defini-

tion used in the Federal Employees Act for overtime, and this is the question which has been submitted to the Comptroller General.

Senator HILL. When did you submit this question to them?

Mr. KELLY. On February 4.

Senator HILL. You have no answer yet?

Mr. KELLY. We have received two replies from the General Counsel of the Comptroller General's office, advising us they do have the problem under study and will give us an opinion as quickly as they can. They have not as yet rendered an opinion.

(The opinion referred to appears on p. 1050.)

Senator HILL. General Burney, if there should be some further remedial action needed by the Congress, I wish you would advise me.

Dr. BURNEY. I will, sir.

(The Surgeon General's response appears on p. 1049.)

Senator HILL. Is there anything else you would like to add, sir?

Dr. LOWRY. I do want to make it clear that these men are being paid under the interim regulations and have, as a matter of fact, been paid over $125,000 in overtime pay since they started doing this work last July. It is just a question of how much, whether this is the right amount.

Senator HILL. When did they first start receiving this overtime pay?

Dr. SACKETT. In December.

Senator HILL. When did you start rendering this service, the overtime service?

Dr. SACKETT. When the act became effective, which was June 21.

Senator HILL. Last June?

Dr. SACKETT. Yes, sir.

Senator HILL. Why was there all of this delay?

Dr. SACKETT. It was due to the difficulty in arriving at the procedure for billing and collections, so that during this period of time when our discussions were going on, we had no basis on which to instruct our stations as to the rate to pay the employees.

Senator HILL. Is there anything else you would like to add?

We are certainly very much obliged to you gentlemen. We thank you.

INDIAN HEALTH ACTIVITIES

STATEMENT OF DR. JAMES R. SHAW, CHIEF, DIVISION OF INDIAN HEALTH, ACCOMPANIED BY DR. JAMES V. LOWRY, ACTING CHIEF, BUREAU OF MEDICAL SERVICES; DR. LEROY E. BURNEY, SURGEON GENERAL; ROY L. HARLOW, CHIEF FINANCE OFFICER; AND JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

"INDIAN HEALTH ACTIVITIES

"[Indian health activities:] For expenses necessary to enable the Surgeon General to carry out the purposes of the Act of August 5, 1954 (42 U. S. C. 2001), including services as authorized by section 15 of the Act of August 2, 1946 (5 U. S. C. 55a) (including not to exceed $10,000 for such services at rates not to exceed $100 per diem for individuals, when authorized by the Surgeon General); purchase of not to exceed [fifty] *twenty-five* passenger motor vehicles for replacement only; hire of passenger motor vehicles and aircraft; purchase of reprints; payment for telephone service in private residences in the field, when authorized under regulations approved by the Secretary; and the purposes set forth in sections 321, *322 (d)*, *324* and 509 of the Public Health Service Act; [$40,100,000] *$40,225,000.*"

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate	$40,100,000	$40,225,000	$40,225,000
Contract authorization (48 U. S. C. 50d-1; 42 U. S. C. 2001)	615,572	615,572	615,572
Applied to contract authorization (48 U. S. C. 50d-1; 42 U. S. C. 2001)	−615,572	−615,572	−615,572
Total obligations	40,100,000	40,225,000	40,225,000

Obligations by activities

	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Hospital health services	3,884	$23,496,000	3,884	$23,607,000	3,884	$23,607,000
2. Contract patient care	0	8,000,000	0	8,000,000	0	8,000,000
3. Field health services	754	6,536,000	754	6,547,000	754	6,547,000
4. Program direction and management services	310	2,068,000	310	2,071,000	310	2,071,000
Total obligations	4,948	40,100,000	4,948	40,225,000	4,948	40,225,000

Obligations by objects

	1958 appropriation	1959 budget estimate	1959 House allowance
Total number of permanent positions	4,948	4,948	4,948
Full-time equivalent of all other positions	88	88	88
Average number of all employees	4,594	4,594	4,594
Number of employees at end of year	4,770	4,770	4,770
01 Personal services	$21,952,200	$22,057,200	$22,057,200
02 Travel	1,077,600	1,077,600	1,077,600
03 Transportation of things	462,600	462,600	462,600
04 Communication services	179,000	179,000	179,000
05 Rents and utility services	405,700	405,700	405,700
06 Printing and reproduction	74,300	74,300	74,300
07 Other contractual services	9,886,600	9,886,600	9,886,600
Services performed by other agencies	466,000	466,000	466,000
08 Supplies and materials	4,512,000	4,512,000	4,512,000
09 Equipment	572,800	572,800	572,800
11 Grants, subsidies and contributions	1,168,400	1,206,400	1,206,400
15 Taxes and assessments	53,300	53,300	53,300
Subtotal	40,810,500	40,953,500	40,953,500
Deduct charges for quarters and subsistence	710,500	728,500	728,500
Total obligation	40,100,000	40,225,000	40,225,000

Summary of changes

	Positions	Amount
1958 actual appropriation	4,948	$40,100,000
1959 appropriation request	4,948	40,225,000
Net change requested	0	125,000

	1959 budget estimate	1959 House allowance
Increases for mandatory items:		
Retirement contributions annualization	$38,000	$38,000
Annualization costs for wage board	105,000	105,000
Offset by additional deductions for quarters and subsistence	−18,000	−18,000
Total change requested	125,000	125,000

PREPARED STATEMENT

Senator HILL. We are happy to have you, Dr. James R. Shaw, Chief, Division of Indian Health. Do you have a statement which you wish to file?

Dr. SHAW. Yes, sir; and I have a summary that I would like to read.

Senator HILL. All right, your formal statement will be put in the record at this point.

(The statement referred to follows:)

FORMAL STATEMENT OF DR. SHAW

Mr. Chairman and members of the committee, when the Public Health Service assumed responsibility for the Federal Government's Indian health program July 1, 1955, we considered that we had a mandate from the Congress to improve health services and facilities as rapidly as possible within the limits of the funds available. Recognizing the urgent health needs of the Indians and the meager health resources available for the protection and maintenance of their health, the Congress had voted a substantial increase in the appropriation for Indian health.

The challenge which confronted us on July 1, 1955, was a formidable one. The Indian health program was seriously undermanned in relation to the immediate tasks which faced us. Half of the 56 hospitals had only 1 doctor. There were not enough pharmacists to supervise the safe use of drugs in Indian health facilities. The dental staff had only one-half the number of dentists and dental assistants needed to provide even emergency care. Environmental sanitation services were available to less than one-third of the Indians who look to the Indian health program for help. There were not enough public-health nurses to provide the needed immunizations and other essential preventive services in the field. There were not enough health educators to provide significant service in this important preventive activity. There was only a skeleton staff of medical social workers, and their services were limited to a few of the largest hospitals. There were no nutritionists, and no nutritional health services. Specialized services for mothers and children outside hospitals were provided only on a token basis.

Serious shortages of housing accessible to Indian health installations made it impossible for us to fill some critical vacancies at hospitals and field health stations. The housing deficiency, which has not by any means been overcome, was so bad then that we had medical personnel commuting as far as 60 miles over poor roads to reach their posts of duty. We still have some medical posts unfilled because of lack of housing.

The physical plant—hospitals and field health installations as well as staff housing—was in deplorable condition. Maintenance of buildings and utilities had been deferred because of limitations of funds; medical equipment was old and outmoded; and the extent of the deficiencies in the physical plant was not known.

The Indian beneficiaries then, as now, were making constantly increasing use of program services and facilities. A huge backlog of individuals with communicable as well as chronic diseases could not be reached with proper care. There was a waiting list of about 2,500 known tuberculous patients who needed hospital care, but who could not be admitted to hospitals because of shortages of beds in our own facilities and severe limitations in the funds available for care in contract facilities.

This, very briefly, was the picture when we took over the program in 1955. It is very different today. While we still are far from our goal of raising the level of Indian health to the standards of the population as a whole, we have made definite progress which has produced measurable results. Indeed, there has been demonstrable progress in every phase of the Indian health program.

Improvements in the program are significant mainly in terms of what they mean to the people served. Here are some specific results of program improvements made possible since 1955 by the higher level of support provided by the Congress.

The tuberculosis death rate among American Indians has been cut 25 percent since 1955, and it has been cut 57 percent among Alaska natives. When we took this program over, one in every 30 Alaska natives was under hospital treatment for tuberculosis. Today, this proportion is down to 1 to 50. Neither within the United States nor in Alaska are there any waiting lists of Indians or Alaska natives in need of hospital care for tuberculosis. The decline in the incidence of tuberculosis has been sufficient to enable us to hospitalize without delay every beneficiary who needs such care.

The infant death rate has dropped 17 percent, from 65.5 to 54.6 deaths per 1,000 live births. The death rate from gastroenteric diseases, which account for a high proportion of the infant deaths, has been cut in half.

Evidences of progress in Indian health such as these suggest a much more intensive use of Indian health facilities and services by the Indians than in the past. This is the case. Admissions to Indian, Alaska native, and contract hospitals have increased 32 percent in less than 3 years. The average patient load is 13 percent higher, and the outpatient medical services rendered are 33 percent greater than in 1955. Reflecting higher quality care and earlier medical attention sought by the Indians is a significant decline in hospital deaths—from 2.3 per 100 admissions in 1955 to 1.8 per 100 admissions in 1957. Outpatient services in facilities of the Public Health Service have increased 29 percent, and visits to dental clinics have increased 34 percent.

Improvements in the health status of the Indians since 1955, and their greater use of Indian health services, reflect increases in the staff of the Division of Indian Health. By nearly doubling the number of physicians on duty, we have provided a minimum of two doctors in nearly all of our hospitals. We have increased the number of pharmacists from 7 to 32, thereby providing for supervision by registered pharmacists of all drugs distributed to outlying hospitals and field stations as well as those used in the larger facilities.

We have doubled the dental staff, making it possible for dental personnel to increase substantially their work in preventing dental decay among children, and in providing some selective treatment for adults beyond the emergency care which was all that could be given previously.

We have more than doubled the sanitation staff, extending environmental sanitation services to 60 percent of the beneficiary population. Previously, these preventive services reached only 30 percent of the beneficiaries. They stress the importance of safe water supply and proper waste disposal, and also include spraying for control of flies and eradication of other pests which carry disease.

The number of public health nurses has been increased by one-third, in spite of a nationwide shortage in all categories of professional nursing personnel. This has made possible significant improvements in health services provided in the field.

As a means of preventing much of the acute illness which accounts for the unfavorable status of Indian health, we have placed heavy emphasis upon health education. In addition to increasing the staff of professional health educators who guide this activity, we have trained and placed in the field 28 community workers to teach the Indians how to avoid infections.

By increasing the number of medical social workers from 8 to 21, we are more effectively bridging the gap between hospital care and life in the community for those patients who need help with outside living arrangements in order to leave the hospital. In 1 year, our medical social workers facilitated the discharge of some 250 chronically ill patients who could not have left the hospital unless special living arrangements had been made for them. The medical social workers also are assisting our beneficiaries in making better use of existing State and local health and welfare services.

Prior to 1955, there was no organized nutritional health service in the Indian health program. Recognizing the need for steps to prevent loss of health, and even of life, due to diseases of nutritional deficiency in young children and degenerative diseases among older people, we added nutritional services to our preventive activities in 1957. Professionally directed nutrition services now are provided on a limited basis to enhance the work of physicians, hospital and public health nurses, and other health personnel. We have added 5 nutritionists to the program, and we have increased the number of hospital dietitians from 16 to 24.

Since the excessive death rate among Indian infants is the major factor in the early average age at death in the Indian population—39 compared with 61

for the population as a whole—intensive efforts are needed in the area of maternal and child health. Since taking over the program we have added three physicians and a public health nurse who are specialists in maternal and child health to provide professional guidance to field staffs in this specialty and in school health.

Of the 906 employees added to the Indian health program since its transfer to the Public Health Service, more than half of them are in the professional or paramedical categories. More than half of all Indian health employees are of Indian descent. The Service has trained more than 400 Indians for specialized work in health occupations, and these Indians now are working in the field as our employees. They include licensed practical nurses, sanitarian aids, community workers (health), and dental assistants.

We are giving every encouragement to the Indian people to assume greater responsibilities for their own health services, and they are making gratifying progress in this direction. Health committees of the tribal councils are becoming increasingly effective, and are cooperating with us in our efforts to provide services that fit the needs of the beneficiaries as closely as possible. Of equal significance is the fact that tribal groups are putting substantial sums of their own limited funds into health services which supplement those provided through our program.

To alleviate the shortage of staff housing as quickly as possible, so that doctors, nurses, and other health staff members could be assigned where they were needed, the Public Health Service adopted expediencies of an emergency nature. We have provided 326 temporary housing units pending new construction of permanent dwellings. There are now 28 new housing units under construction and 20 additional units on the market for bids. Despite these measures, we are aware that the housing shortage—particularly in remote localities—will pose a serious problem for a long time.

Hospital maintenance, which had been minimal to the point where serious deterioration resulted, has received heavy emphasis. It has been necessary to increase hospital maintenance expenditures threefold since the Public Health Service assumed responsibility for Indian health. Some of the most urgent requirements for new and replacement surgical and medical equipment have been provided for the hospitals. A separate statement covers construction of Indian health facilities.

In accordance with a request from the House Appropriations Committee, the Public Health Service undertook a comprehensive survey covering the physical facilities of the program, the status of Indian health, the program requirements for meeting the health needs of the beneficiary population, and the probable costs of raising health levels among the Indians to an acceptable level. The final report of this comprehensive survey, in which the Public Health Service drew upon its resources beyond the Indian health program, was submitted to the House Appropriations Committee last year.

The report of this survey defines the extent to which Indians bear burdens of ill health and early death far in excess of the population as a whole. It clearly shows that the excessive numbers of deaths among Indian children could be prevented, and that many lives in all age groups could be saved by the application of modern public-health methods. These methods are well known and widely used for the benefit of most Americans.

Our survey has defined the problems in Indian health in clear and explicit terms. We now have a much better knowledge of what needs to be done and how to do it. We know that it ultimately will cost $65 million a year to operate a reasonably adequate program to meet the need. The recommendations embodied in the survey report are realistic and feasible. We hope to carry them out over a reasonable period of time. As a result of this survey and subsequent appraisals, we now have a full knowledge of the deficiencies in the physical plant and what needs to be done in the way of new construction and repairs.

THE INDIAN HEALTH PROBLEM

In spite of recent expansion and improvement of the Indian health program, the health problem posed by conditions peculiar to the Indian and Alaska native populations remains one of tremendous magnitude. As indicated in the Indian health survey report, "Indians in the United States today have health problems resembling in many respects those of the general population of the Nation at the turn of the century." The continued unsatisfactory level of health among the Indians is well documented. The survey report points out that deaths among

Indians from tuberculosis, gastroenteric and other communicable diseases, and accidents are 3 to 10 times higher than in the general population. Twenty-three percent of all Indian deaths occur among infants, compared with only 7 percent for the population as a whole.

Trachoma, a highly infectious eye disease which in former years caused considerable blindness in the Indian population, has reappeared on the reservations and in Indian boarding schools. This disease had previously been brought under control and virtually wiped out. At one large Indian boarding school where 1,243 students were examined, 325 were found to have trachoma. The disease also was discovered among student bodies in other Indian schools.

Among the Alaska natives—a group including the Eskimos and Aleuts as well as the Indians of Alaska—health conditions are even more unfavorable. These people are isolated not only by distance, but by severe weather and difficult terrain. As pointed out earlier, about 1 out of every 50 Alaska natives is under treatment for tuberculosis, and there is a high incidence of many infectious diseases in this population.

The report of the Indian health survey states that "Inadequate health services explain in part the present depressed condition of Indian health. Although the Federal Government began to provide health services for Indians in the early 19th century, these services never have been wholly adequate. Preventive health services in particular have fallen short of the need." We recognize that the services we are providing require further expansion for our ultimate goal of raising the health status of the Indian people to the national level.

Providing health services for rural populations, even when there are no complicating factors such as cultural differences, language barriers, and economic depression, is inherently a costly and difficult undertaking. The Indian and Alaska native populations, scattered on generally poor lands in 24 States and Alaska, pose problems which are unique in the field of public health and medical care. Some of these cannot be eliminated in the foreseeable future. The survey report briefly summarizes these obstacles in the following terms:

"Lack of health services is not alone responsible for poor health among the Indians. Substandard and overcrowded housing and lack of sanitary facilities have been among the factors promoting disease. Often water is scarce and from contaminated sources. Indian reservations typically are in remote and sparsely settled areas. Even today, many Indians have less than grade-school education. They are poor; more than half have family incomes of less than $1,000 a year."

While some improvements in the environment of the Indians can be achieved through such services as sanitation and health education in acceptable health practices, the Indian health program alone cannot overcome all of these obstacles to better health. However, the conditions which surround Indian life are of great significance in any consideration of the costs and effectiveness of providing essential health services through this program.

Up until the 1957 fiscal year, we were expanding Indian health services through an orderly buildup of the program, with the hope of following the recommendations of the report of the Indian health survey. In 1958, it was necessary for us to retrench somewhat from the 1957 level of activity because of mandatory increases in costs which had to be paid from the appropriation. A major item of mandatory increase was the increase in the Government's contribution to the civil-service retirement fund.

In 1959, we will be holding the line, with a request developed with consideration for the current heavy demands imposed upon the national economy as well as the needs of the Indian health program.

PROVIDING HEALTH SERVICES FOR INDIANS

Hospital inpatient and outpatient care is provided at 55 hospitals operated by the Public Health Service and at more than 270 non-Federal medical facilities on a reimbursable basis or through contractual arrangements. Preventive health services, diagnoses, and therapeutic services for ambulatory patients are provided at health centers, Indian schools, field health stations, hospital clinics, and other locations totaling more than 250.

Patient care through contractual arrangements is provided in non-Federal hospitals and by private practitioners in localities where such health resources are readily available and economical to use, where the Public Health Service has no suitable facilities of its own, and in cases requiring specialist services which are not available in our own facilities.

Since it is not possible for us to staff our many relatively small hospitals to provide the wide range of diagnostic and specialist services which are required, it is necessary for us to continue the practice of purchasing such services from local health resources. These services are essential for maintaining minimal standards of medical care. They bring maximum benefit to patients at the lowest cost, and we hope to expand them in the future.

As in the case of contract patient care, experience over a long period of time has demonstrated the advantages of providing preventive services through contracts with State or local health agencies. Reflecting the desire of the Congress, it is the policy of the Public Health Service to serve beneficiaries of this program through such contracts wherever practicable and where the kinds and intensity of service required are available from local community resources. Twenty-nine such contracts now are in effect. However, the report of the Indian health survey points out that "Even now about half of the total Indian population lives in areas where local public-health services are either undeveloped or nonexistent." For this reason, the Public Health Service is responsible for providing preventive services directly to a majority of its Indian beneficiaries, particularly where Indians are concentrated on reservations and isolated from established community services.

The Indian health program is responsive both to the needs of the people it serves and to the trends in public health within its area of responsibility. Our progress in tuberculosis control, for example, has made a significant impact upon the entire Indian health program. With earlier and more effective treatment directed against this disease, the length of the hospital stay of patients with tuberculosis has declined considerably—formerly 18 to 24 months, it now averages about 9 months.

In the Indian health program, this means that greater emphasis must be given to tuberculosis treatments which extend beyond the walls of the hospital. The shorter hospital stay is augmented by regular medical supervision, systematic followup by public-health nurses, case planning by medical social workers, and use of carefully controlled antituberculosis drugs where indicated. We anticipate that as a result of the shorter hospital stay of tuberculous patients, there will be an increase in readmissions for evaluation and determination of the patients' needs for further treatment. Even with the reduction in tuberculosis death rates among Indians and Alaska natives since 1955, this disease continues to be a major problem in Indian health.

The decreasing number of tuberculous patients receiving hospital care has resulted in a gradual shift in the characteristics of our patient load and operations. It has made available some hospital beds, staff time, and money which we are using in a more comprehensive attack on the backlog of illness and disability among the Indians which requires general medical and surgical services. By leading our beneficiaries to seek medical care earlier than in the past, it is making our treatment services more effective generally.

The increasing demand for health services on the part of our beneficiaries is evident from the continuing rise in hospital admissions. During each of the past 2 years, hospital admissions increased by nearly 15 percent. In 1957, hospital admissions totaled 66,000, including 13,000 in contract facilities. The 7,328 births reported in our own hospitals in 1957 was an increase of 6 percent over 1956, and is the largest number on record, with a continuing rise indicated for 1958. This record is a further indication of increasingly effective health education.

Services provided by hospital staffs at hospital outpatient clinics and related field clinics in 1957 also reached a new high, increasing 17 percent over 1956. The total for the year exceeded 657,000, which reflected a particularly large increase in the provision of preventive services—35 percent over 1956.

Within the limitations of available personnel and equipment, we believe that our hospital and clinic operations have become as efficient as possible. To a great extent, the degree of efficiency which we have attained despite personnel shortages is attributable to the dedication and devotion to duty of staff members who spend more time and energy on their duties than we should reasonably expect.

More complete medical records and better procedures are preventing duplication of costly medical services and contributing to the effectiveness of diagnoses, medical care, and followup. More intensive medical social services are developing in local and State administrations increased understanding of the Indian health problem and their responsibilities for Indian citizens.

Greater activities in dental health are reflected in a substantial increase in the number of dental visits handled in 1957 by our relatively small staff of dental officers and assistants. This increase amounted to 20,000 visits, to a total of 135,000 for the year. Topical fluoride treatments are provided in an effort to reduce dental decay. Most of our dental services, except for emergency care, are for children. However, only about 25 percent of the dental need among the Indians is being met.

Acute medical problems cannot always be anticipated, particularly with respect to financing emergency measures required to meet them. Mention already has been made of the wholly unexpected reappearance of trachoma, a virulent and potentially dangerous cause of blindness. The immediate action which was mandatory to stop the spread of this disease and protect the sight of hundreds of children required reprograming funds which were intended for other uses such as making specialist services available to correct physical disabilities in children.

Asian influenza posed another medical problem which required prompt, decisive action and which could not be anticipated at the time of previous budget estimates. Measles also reached epidemic proportions in some areas. Control of these infections required expenditures of money and effort beyond forecasts or expectations. Because of the dangers inherent in these diseases, their control assumed a much higher priority for staff time and money.

NEEDS OF THE INDIAN HEALTH PROGRAM FOR 1959

The $40,225,000 requested for 1959 will enable the Public Health Service to operate the Indian health program essentially at the same level as 1958. The $125,000 increase requested over the 1958 appropriation is needed for annualization of increased wage-board costs and contributions to the civil-service retirement fund.

In seeking to hold the gains that we have made and continue the program at its present level, we are faced with three factors which add difficulty to our task. The first of these is the relatively rapid rate at which the Indian population is increasing—2 percent annually, compared with 1.8 percent for the population as a whole. Related to this is an even more rapid annual increase in the number of births in Indian hospitals. Today there are approximately 343,000 Indians and 37,000 Alaska natives who depend substantially on the Public Health Service for medical care and preventive health services.

Second, as the benefits of modern health services become more widely appreciated among Indians and Alaska natives, the demands upon the Indian health program are increased. New areas of unmet health needs—particularly in such fields as sanitation, public health nursing, nutrition, and health education—are becoming more acute. It is clear to us that the completely inadequate services of a few years ago no longer would be acceptable to the people who depend on these services. We feel that their demands are far from excessive in view of their great needs, and that it is to the benefit of the country as a whole that they are endeavoring to improve their health standards.

Finally, costs of providing medical services are continuing to rise. This is true for the country as a whole, and the general increases of course affect the operations of the Indian health program. The greatest single increase in the Consumer Price Index this year is for medical care.

We have estimated our needs as closely as possible in an effort to determine the cost of holding the hard-won gains made since 1955, and of providing a health maintenance program in which the treatment and prevention of diease are integrated in the interests of efficiency and economy. The $40,225,000 requested will enable us to continue our efforts to meet the extensive health needs of our Indian and Alaska native citizens, and at the same time assist them in making the gradual transition to full participation in local community health activities.

Better health for this important segment of our population means greater savings in human resources which are beyond measurement.

INDIAN HOSPITAL PROBLEMS

Dr. SHAW. Mr. Chairman and members of the committee, when the Public Health Service assumed responsibility for the Indian health program July 1, 1955, we faced a formidable challenge. The pro-

gram was seriously undermanned, with half of the 56 hospitals having only 1 doctor.

Senator HILL. Half of them had only one doctor?

Dr. SHAW. Yes, sir.

Senator HILL. How did the patient load range in those hospitals? I realize that it varied. Do you recall how it ranged?

Dr. SHAW. Over 2,500 patients.

Senator HILL. Two thousand and five hundred patients in those hospitals. If you have this, I would like you to supply it for the record, the minimum number of patients in any one of the hospitals and the maximum number in any one of the hospitals that only had one doctor.

Dr. SHAW. Yes, we will have to supply it.

Senator HILL. All right, sir, supply it for the record and we will appreciate it.

(The information referred to follows:)

On July 1, 1955, when the health program was transferred to the Public Health Service, there were 28 hospitals being operated with only 1 physician in assignment. The maximum number of patients being cared for in any one of these 28 hospitals, by 1 physician, was 102 (Shawnee, Okla.), and the lowest census among these hospitals during that fiscal year was 2 (Hoopa, Calif.).

PERSONNEL SITUATION

Dr. SHAW. There were not enough pharmacists to insure safety in the use of drugs. We had only one-half the number of dentists and dental assistants needed to provide even emergency care. The environmental sanitation staff was so small that only one-third of the beneficiary population could be reached with these services. There were not enough public-health nurses and health-education staff members to meet urgent needs for disease prevention. There was only a skeletion staff of medical social workers, no nutritionists, and no maternal and child-health specialists outside hospitals.

Senator HILL. Maybe I should not make this comment, but I believe at one time the Indians owned all of this land from the Atlantic Ocean to the Pacific, did they not?

Dr. SHAW. Yes, sir.

Senator HILL. All right; proceed.

Dr. SHAW. Serious shortages of staff housing made it impossible to fill some critical vacancies at health installations. While we have alleviated these shortages to some extent, the housing shortages are still serious, and we still have some medical posts unfilled for lack of housing. The physical plant was in deplorable condition, due to deferred maintenance.

TUBERCULOSIS SITUATION

The Indian beneficiaries then, as now, were making increasing use of program services and facilities. There was a waiting list of about 2,500 known tuberculous patients who needed hospital care but who could not be admitted to our hospitals because of shortages of beds.

The picture is very different today. While we still are far from our goal of raising the health status of Indians to the standards of the general population, we have made definite progress which has produced measurable results.

The tuberculosis death rate among American Indians has been cut 25 percent since 1955, and it has been cut 57 percent among Alaska natives. There are no waiting lists of Indians or Alaska natives in need of hospital care for tuberculosis. The infant death rate has dropped 17 percent, and the death rate from gastroenteric diseases has been cut in half.

INCREASE IN USE OF SERVICES

Admissions to Indian, Alaska native, and contract hospitals have increased 32 percent since 1955. The average patient load is 13 percent higher, and the outpatient medical services rendered are 33 percent greater. Hospital deaths have declined from 2.3 to 1.8 per 100 admissions. Outpatient services have increased 29 percent, and visits to dental clinics have increased 34 percent.

These increased services were made possible by the expansion and improvement of the program since 1955. By nearly doubling the number of physicians, we have provided a minimum of two doctors in nearly all of our hospitals. We have doubled or tripled the number of pharmacists, dentists and dental assistants, sanitation-staff members, and medical social workers. We have added nutritionists, community workers, and maternal and child health specialists where there were none in 1955, and we have increased the number of public-health nurses by one-third.

Shortages of housing have been alleviated to some degree by erection of 326 temporary housing units. We are building 28 new housing units, and soliciting bids for construction of 20 more. Expenditures for hospital maintenance have been increased threefold, and some of the most urgent requirements for new medical equipment have been provided.

Senator HILL. Let me ask you this: You speak about housing units. What do you contemplate using here, under your policy?

Dr. SHAW. The smallest unit would be an efficiency unit for an unmarried nurse up to 3 or 4 bedrooms for a physician with a larger family.

Despite these and other improvements, the Indians continue to bear excessive burdens of ill health and early death. Their average age at death is only 39, compared with 61 for the general population. Indian deaths from tuberculosis, enteric diseases, and accidents are 3 to 10 times higher than in the population as a whole. Twenty-three percent of all Indian deaths occur among infants, compared with a national figure of 7 percent.

AMOUNT REQUESTED

The $40,225,000 requested for 1959 will enable the Service to operate the Indian health program at essentially the same level as 1958. The $125,000 increase over the 1958 appropriation is needed for annualization of increased wage-board costs and contributions to the civil-service retirement fund.

I would be happy to answer any questions.

Senator HILL. I take it, Doctor, as we have improved the health facilities and health service, that the Indians have been more cooperative and more anxious to receive this service; is that right?

Dr. SHAW. Yes, sir. The Indians have proven very appreciative and very receptive to the improved services that we have been able to bring them. Given a logical explanation which they could understand in their language and which they can accept within their culture, they have proven more than willing to contribute in their own behalf and to participate with us in the solution of their health problems.

REDUCTION IN FUNDS

Senator HILL. Doctor, I note your request has been for $45 million, and that the Budget cut that almost $5 million down to $40,225,000. I would certainly like to know, and you can supply this in detail, if you wish, for the record, just how the request for $45 million, if it had been granted, would have been spent, insofar as this additional $4,775,000 is concerned.

Dr. SHAW. I would be very happy to supply the details; however, I will appreciate the opportunity to explain briefly what we intended to do.

Senator HILL. All right; give me a brief statement and then supply the full picture for the record and, in supplying that for the record, you might, if there is some need more urgent than another, so stipulate the fact.

(The material referred to follows:)

Reductions made by Department of Health, Education, and Welfare

Activity	PHS request		HEW allowance		Reduction	
	Positions	Amount	Positions	Amount	Positions	Amount
Hospital health	4,351	$27,253,000	4,221	$25,852,000	130	$1,401,000
Contract patient care		9,313,000		9,000,000		313,000
Field health services	1,088	9,236,000	938	8,000,000	150	1,236,000
Program direction and management services	323	2,198,000	316	2,148,000	7	50,000
Total	5,762	48,000,000	5,475	45,000,000	287	3,000,000

The reduction from the hospital health activity included $598,000 for 130 positions, primarily nursing staff, in the 55 hospitals. These nurses would have improved the standard of nursing care and would provide coverage for an increase of 30 in the average daily patient load. Of the amount disallowed $350,000 would have been utilized for replacement of obsolete, wornout and unsafe items of hospital equipment. Requirements include equipment for surgical, laboratory, X-ray, physical medicine, and dental services as well as for bed care—dietary equipment, carts, beds, and bedside furniture. About $93,100 would have been used to increase the inventory of drugs and medical supplies. Other deductions include $100,000 for 50 additional native students at schools for practical nurse training, $65,000 for hospital maintenance costs, and $195,000 for other nonsalary costs (fuel oil, travel, communication, etc.).

The reduction of $313,000 for contract patient care means that fewer patients can be taken care of in contract facilities. It is estimated that an average daily patient load of 1,469 would have been financed under the request of $9,313,000 and that the load would be reduced by 49 under the allowance of $9 million.

All preventive and curative health services provided Indians by other than hospital staffs are programed as "Field health services." Included in this activity are the operation of diagnostic and treatment clinics (including immunization, preventive medicine and dental clinics and boarding school infirmaries), and the

provision of services by traveling teams of physicians, dentists, and nurses who give medical care of Indian patients. The Field Health Services program also includes sanitation activities, public health nursing, and services of specialists in maternal and child care, communicable diseases, orthopedic and crippling conditions, health education, nutrition and medical social services. Where advantageous and to the extent funds are available, contracts are made with State and local health departments for public health and preventive services. The reduction of $1,236,000 would have been used for 150 positions to carry out the above activities. Of these positions 56 would consist of dentists, dental assistants, sanitarians, public health nurses, and health educators all of whom would be engaged in community health activities. The balance of 94 would have been assigned to health centers, clinics, and Indian boarding schools and would have consisted of physicians, X-ray and laboratory technicians, nutritionists, and medical social workers.

A majority of the personnel included in the "Program direction and management services" activity are located in the area offices and at headquarters. This staff includes the professional and supporting disciplines required to effectively manage and service a widely dispersed and extremely complex program. The reduction of $50,000 by the Department precludes the employment of 7 additional specialized skills previously not available because of funds. The additional proposed positions included one professional in the fields of pediatrics, orthopedics, nutrition and ophthalmology and three supporting clerical personnel.

Reductions made by Bureau of the Budget

Activity	HEW request		Bureau of Budget allowance		Reduction	
	Positions	Amount	Positions	Amount	Positions	Amount
Hospital health	4,221	$25,852,000	3,884	$23,607,000	337	$2,245,000
Contract patient care		9,000,000		8,000,000		1,000,000
Field health services	938	8,000,000	754	6,547,000	184	1,453,000
Program direction and management services	316	2,148,000	310	2,071,000	6	77,000
Total	5,475	45,000,000	4,948	40,225,000	527	4,775,000

The reduction in the hospital health activity involved the elimination of 337 planned new positions, chiefly in the critical shortage categories. These include 100 graduate nurses and nursing assistants; 50 dietitians and dietetic assistants; 18 medical and dental officers and 169 technical, auxiliary, and other positions, such as X-ray, laboratory, pharmacy, physical therapy, medical social service, medical records, maintenance, and administrative services. These additional positions would have made it possible to treat a daily average of 170 more inpatients than estimated in the President's budget, and to increase modestly the hours of nursing care per patient day; they would have made it possible to reduce the workload for doctors and nurses; and they would have made available additional specialty care by pediatricians, surgeons, obstetricians, ophthalmologists, radiologists, and pathologists.

The reduction in contract patient care involves the elimination of the care of 160 additional patients per day in community general hospitals and in State hospitals for the mentally ill with which the Service contracts. To bring the standard of medical care up to an acceptable level, additional provision would have been made for laboratory services; referrals to diagnostic centers; specialized facilities for after care through expanded contractual arrangements; and contracts with additional private physicians and dentists.

The reduction in field health services involved the elimination of 184 planned new positions—41 for dental services; 54 for public health nursing; 19 for sanitation activities; 9 for health education; and 61 for other health specialties and auxiliary functions at field facilities. The filling of these positions would have enabled the Service to provide to the Indians a greater volume and more adequate public health services including immunizations, preventive examinations, maternal and child care, tuberculosis control, nutrition, public health nursing, medical social service, and medical care outpatient services.

EXPANSION OF NEEDED HEALTH SERVICES

Dr. SHAW. We would intend to provide an expansion of all badly needed health services, which includes public health and preventive activities, hospital and medical care, hospitalization and outpatient service. We would attempt to increase the staff on a broad base so as to reduce some of the terriffic workload that our very dedicated and loyal professional employees are carrying. We would make a very serious effort to significantly expand our outpatient and preventive services, because most of our beneficiaries are suffering from infectious diseases which we know how to control and which have been under control in the general population for a considerable period of time.

We would take significant steps in improving the operation of our hospitals by improving the staff, equipment, and supplies and working in the direction of accreditation of these hospitals by the national accrediting bodies.

Senator HILL. Do you have any hospitals at this time accredited by the national accreditation body?

Dr. SHAW. We have been successful in having 11 accredited.

Senator HILL. Eleven?

Dr. SHAW. I think that is correct.

Senator HILL. Out of how many?

Dr. SHAW. Out of 55.

Senator HILL. In other words, there are 44 that the accreditation body did not find qualified for accreditation at this time?

Dr. SHAW. Yes, sir.

In conducting our program our objective is to elevate the Indian health to a level that would compare favorably with the national average. In that respect, I have a series of charts here that you may wish to examine.

We would attempt to do it in a way which would improve the Indians' understanding of their health problems so they would participate with us in the solution of these problems in a way which would add to their own self-sufficiency and which would assist in their integration into their own local communities and would develop within the State, county and local community an understanding by the citizens of the Indians' problem and an acceptance of the Indian into the local health resources.

BASIC PROGRAM

The program is divided, basically, into four main activities. Within the $45 million budget we could provide in our Indian and contract hospitals an increase of 330 in the average daily patient load and 527 additional personnel such as physicians, nurses, dietitians, laboratory technicians, X-ray technicians, nursing assistants, and so on.

Senator HILL. Speaking about the total cared for, do you have Indians now that should be hospitalized and are not being hospitalized because you do not have the beds?

Dr. SHAW. Yes, sir. The Congress, 2 years ago, directed the Surgeon General to have a survey made of the Indian health problem and advise the Congress of the needs of this program. The basic requirements of this program, in accordance with this very detailed survey, would require between $60 million and $65 million. We have $40,100,000 to operate with this year, which means that we are in a position of

making a forced choice as to where to expend our available resources and personnel time. We have done this by attacking the most serious problems first, tuberculosis and infant diarrhea particularly.

There are many patients in the general medical and surgical category that we have deferred because of the more serious infectious diseases which are a public health threat to the total group.

DROP IN ACTIVE TUBERCULOSIS

Dr. LOWRY. Mr. Chairman, in this regard, I think one notable item is that the waiting list for hospitalization of patients with known active tuberculosis was reduced from 2,500 to 0. This group presents a real threat to others, as you know. We have spent the money to get them out of the population, and we have that waiting load down to zero.

Senator HILL. When was that?

Dr. LOWRY. In 1955.

Senator HILL. 2,500 Indians with active tuberculosis awaiting hospitalization?

Dr. LOWRY. Yes, sir. In that regard, I might cite a recent finding or recent survey of some 9,000 Indian children revealed only one active case of tuberculosis. I think that speaks well for the value of spending the money available for this particular distressing type of disorder.

RISE IN INCIDENCE OF TRACHOMA

Dr. SHAW. In this same survey, Senator, which was primarily at an Indian boarding school, we found 680 cases of trachoma in 1,800 children. Trachoma was thought to have been under control; but our survey has shown that it has recurred in significant numbers up as high at 25 to 35 percent, depending on the area from whence they came. We have consequently been forced to develop the program without advanced planning or resources to cover this. A recent survey showed that the treatment was 95 percent effective and that 17 or 18 patients that had not been completely cured with the first treatment were receiving their second course. The Public Health nurses and other Public Health personnel have been notified of the homes from whence these children came and will follow up in an attempt to locate the active cases that originally infected them and bring them under treatment.

Dr. LOWRY. Mr. Chairman, I might say that this is a virus disease that affects the eyelids and blood vessels going into the cornea, and blindness can result from it with a lot of disfiguration around the eyes.

Senator HILL. Is there much trachoma among the non-Indian population of this country? I have not heard much about it.

Dr. SHAW. There is essentially none, sir.

Senator HILL. We are pretty well limited; I mean not altogether, but pretty well limited? In other words, a case today is, more or less, an isolated case.

Dr. SHAW. Yes, sir. That posed another very serious problem for us. Because this type of case has not been available in the medical schools, a corps of doctors has not been trained. We have had to provide for that.

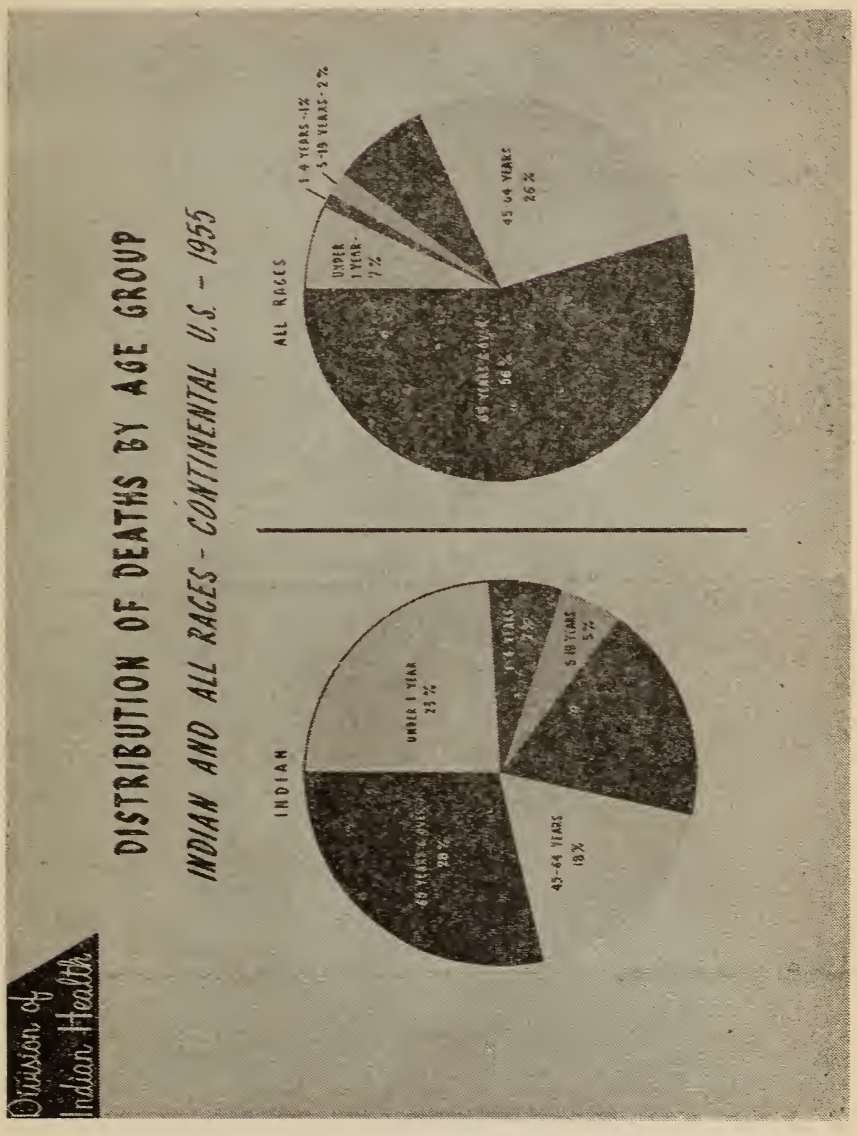
Senator HILL. You mean they have not had clinical experience?

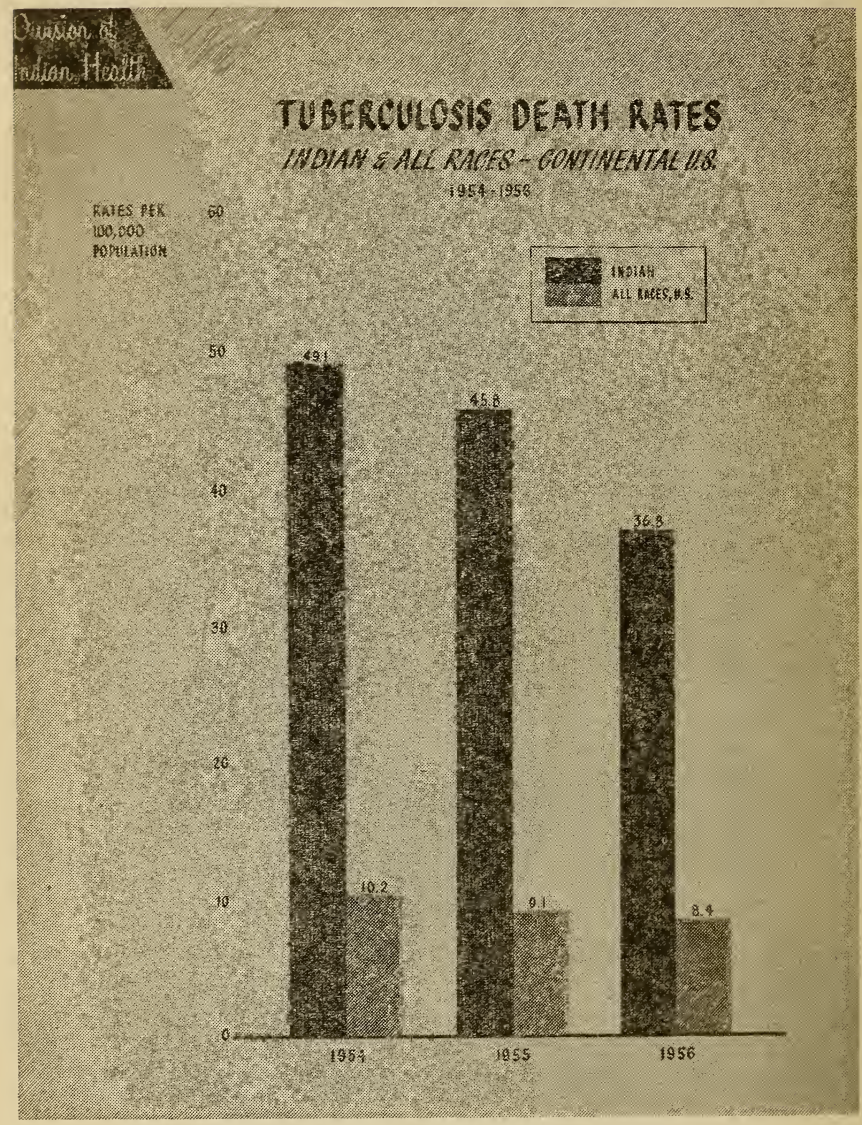
Dr. SHAW. Cases have not been available for teaching purposes. This required that we make provision for the training of fairly appreciable numbers of young physicians in the recognition and treatment of this disease. It also required the publishing of a manual on trachoma and carrying out of research projects which were badly needed to study the epidemiology, and break the chain of infection.

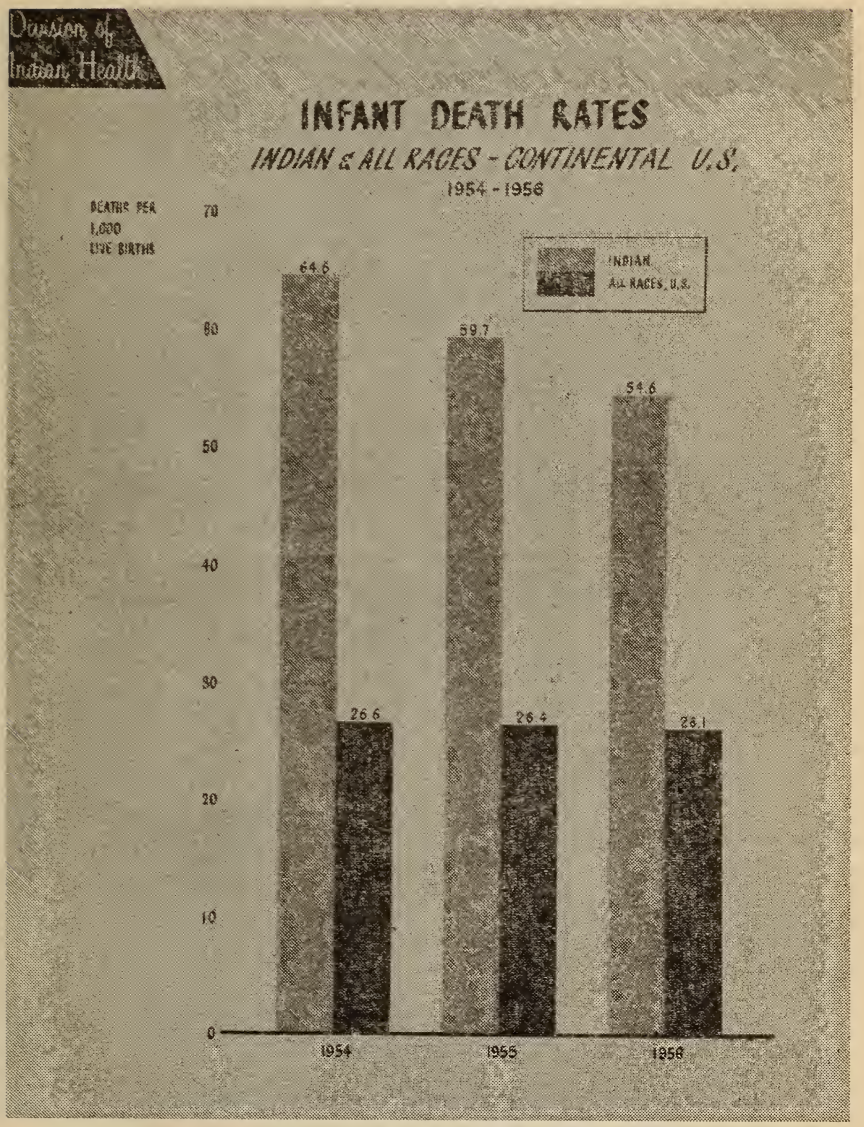
The $45 million budget being cut down to $40,225,000 eliminated 527 positions in total, 184 of which were in field health. This covered the part of the activity having to do with prevention, which is most important in this program; 160 average daily patient load in our 160 contract hospitals operated in those areas where we do not have facilities, and 337 positions in hospital activities with 170 average daily patient load decrease. I have it broken down in detail, which I would be happy to provide for the record.

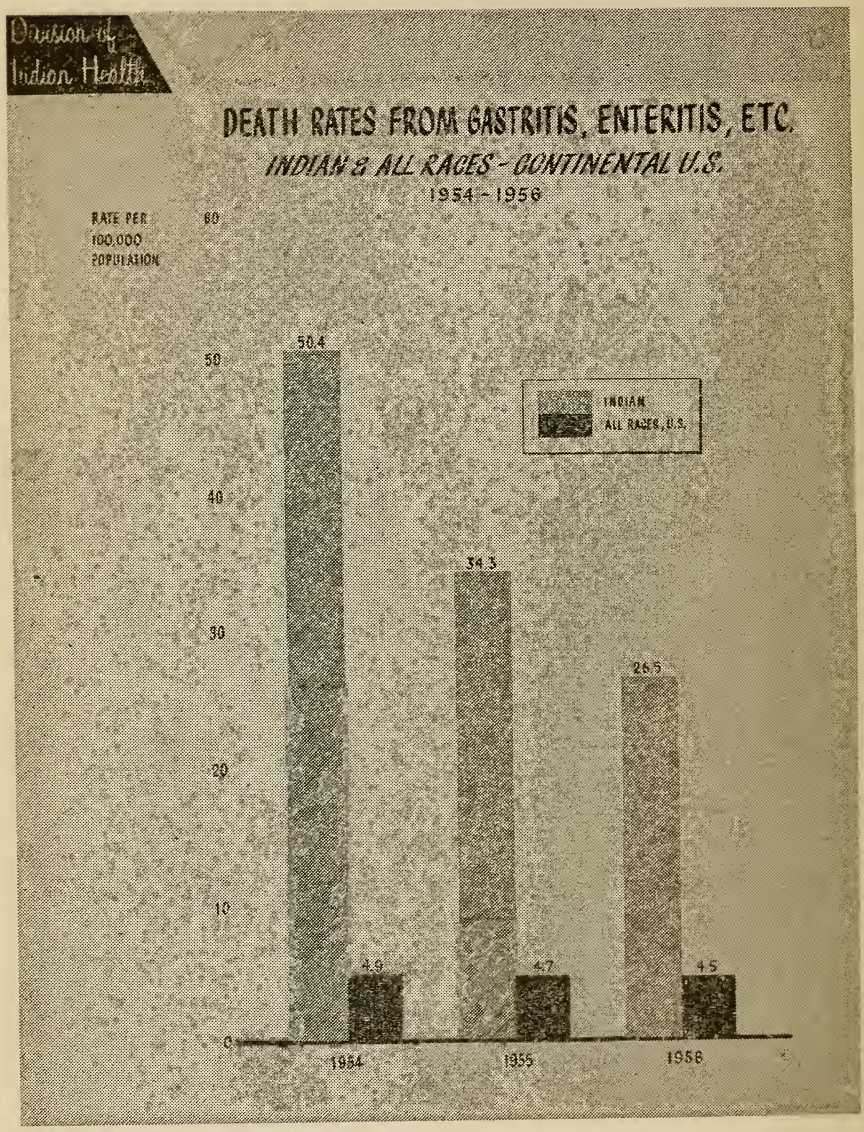
Senator HILL. All right; you do that, Doctor. We would appreciate it. We will also take some of these charts and, I think, put them into the record.

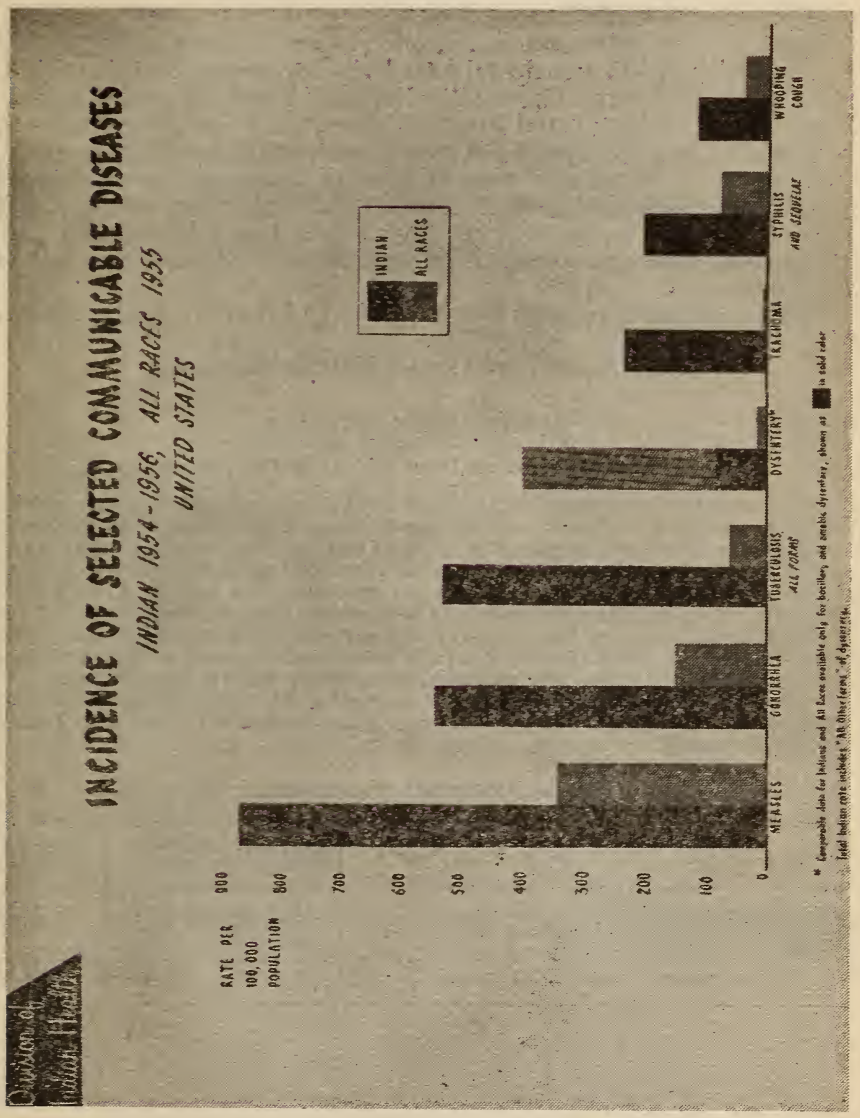
(The charts referred to follow:)


Division of Indian Health
DISTRIBUTION OF DEATHS BY AGE GROUP
INDIAN AND ALL RACES - CONTINENTAL U.S. - 1955
INDIAN
UNDER 1 YEAR 23 %
45 YEARS & OVER 28 %
45-64 YEARS 18 %
5-18 YEARS 5 %
1-4 YEARS 2 %
ALL RACES
UNDER 1 YEAR - 7 %
1-4 YEARS - 1 %
5-19 YEARS - 2 %
45-64 YEARS 26 %
65 YEARS & OVER 56 %


Division of Indian Health
TUBERCULOSIS DEATH RATES
INDIAN & ALL RACES - CONTINENTAL U.S.
1954 - 1956
RATES PER 100,000 POPULATION
60
50
40
30
20
10
0
INDIAN
ALL RACES, U.S.
49.1
10.2
45.8
9.1
36.8
8.4
1954
1955
1956


Division of Indian Health
INFANT DEATH RATES
INDIAN & ALL RACES - CONTINENTAL U.S.
1954 - 1956
DEATHS PER 1,000 LIVE BIRTHS
70
60
50
40
30
20
10
0
64.6
26.6
59.7
26.4
54.6
26.1
INDIAN
ALL RACES, U.S.
1954
1955
1956


Division of Indian Health
DEATH RATES FROM GASTRITIS, ENTERITIS, ETC.
INDIAN & ALL RACES - CONTINENTAL U.S.
1954 - 1956
RATE PER 100,000 POPULATION
60
50
40
30
20
10
0
50.4
34.3
26.5
4.9
4.7
4.5
INDIAN
ALL RACES, U.S.
1954
1955
1956


Division of Indian Health
INCIDENCE OF SELECTED COMMUNICABLE DISEASES
INDIAN 1954-1956, ALL RACES 1955
UNITED STATES
RATE PER 100,000 POPULATION
900
800
700
600
500
400
300
200
100
0
INDIAN
ALL RACES
MEASLES
GONORRHEA
TUBERCULOSIS ALL FORMS
DYSENTERY*
TRACHOMA
SYPHILIS AND SEQUELAE
WHOOPING COUGH
* Comparable data for Indians and All Races available only for bacillary and amebic dysentery, shown as
in solid color
Total Indian rate includes "All Other forms" of dysentery.

EXTENT OF PROGRESS

Dr. SHAW. They show the difference in rates of serious infectious health problems between the Indian and the general population and, also, the progress that we have been able to make.

Senator HILL. That is, since you took over in 1955?

Dr. SHAW. Yes, sir.

Senator HILL. Is there anything else you would like to add?

Dr. SHAW. Well, I could talk for hours, or course, on this subject. Our needs are many. Our staff is limited. The field staff is exceedingly loyal, dedicated, and hard working. They are struggling with a workload that is beyond the means and resources of the program.

In spite of this, and in spite of housing shortages, their morale is exceedingly high, and they are not complaining of the workload, but are only asking for an opportunity to do a better job; this we are attempting to bring to them. I did want to pay that compliment to the field personnel.

Senator HILL. I am sure that it is a richly deserved compliment, sir.

CONSTRUCTION OF INDIAN HEALTH FACILITIES

APPROPRIATION ESTIMATE

"CONSTRUCTION OF INDIAN HEALTH FACILITIES

"[Construction of Indian health facilities:] For construction, major repair, improvement, and equipment of health and related auxiliary facilities, including quarters for personnel; preparation of plans, specifications, and drawings; acquisition of sites; purchase and erection of portable buildings; and purchase of trailers; [$3,096,000] *$2,374,000*, to remain available until June 30, [1959] *1960: Provided*, That such expenditures may be made through the Department of the Interior at the option of the Secretary of the Department of Health, Education, and Welfare: *Provided further, That the unexpended balance of appropriations heretofore granted under this head shall be merged with this appropriation.*

"[For an additional amount for "Construction of Indian health facilities", $34,000, for the construction of sewer and water facilities for the Elko Indian Colony, Nevada.]"

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate	$3,130,000	$2,374,000	$3,124,000
Unobligated balance brought forward	11,526,172	9,472,900	9,472,900
Unobligated balance carried forward	−9,472,900		
Total obligations	5,183,272	11,846,900	12,596,900

Obligations by activities

Activity	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Hospitals and clinics		$2,603,263		$7,019,400		$7,019,400
2. Personnel quarters		1,080,181		769,700		769,700
3. Alterations		1,077,828		2,945,800		3,945,800
4. Other plant facilities		422,000		112,000		112,000
5. Community hospitals serving Indians and non-Indians pursuant to Public Law 85-151		0		0		750,000
Total obligations	[1] 25	5,183,272	[1] 25	11,846,900	[1] 25	12,596,900

[1] The positions are scheduled under a contract allocation to the Department of the Interior and are not assigned directly to the activities; duties are performed in connection with the individual projects within all activities.

Obligations by objects

	1958 appropriation	1959 budget estimate	1959 House allowance
PUBLIC HEALTH SERVICE			
Average number of all employees	24	12	12
01 Personal services: Positions other than permanent	$189,000	$94,000	$94,000
02 Travel	22,000	6,000	6,000
03 Transportation of things	100,000	10,000	10,000
05 Rents and utility services	1,000	900	900
07 Other contractual services	198,441	51,600	51,600
08 Supplies and materials	200,000	22,100	22,100
09 Equipment	14,000	3,000	3,000
10 Lands and structures	100,000	20,000	20,000
11 Grants, subsidies and contributions	0	0	750,000
15 Taxes and assessments	4,000	1,500	1,500
Total, Public Health Service	828,441	209,100	959,100
ALLOCATION TO DEPARTMENT OF THE INTERIOR			
Total number of permanent positions	25	25	25
Average number of all employees	25	25	25
Number of employees at end of year	25	25	25
01 Personal services	$146,100	$146,100	$146,100
02 Travel	40,000	30,000	30,000
03 Transportation of things	1,800	2,000	2,000
04 Communication services	2,000	1,000	1,000
05 Rents and utility services	12,000	7,500	7,500
07 Other contractual services	170,000	107,900	107,900
08 Supplies and materials	30,000	40,000	40,000
09 Equipment	36,000	18,000	18,000
10 Lands and structures	3,907,931	11,275,900	11,275,900
11 Grants, subsidies, and contributions	9,000	9,400	9,400
Total, Department of the Interior	4,354,831	11,637,800	11,637,800
Total obligations	5,183,272	11,846,900	12,596,900

Summary of changes

	Positions [1]	Amount
1958 actual appropriation	25	$3,096,000
1958 supplemental appropriation		34,000
Total appropriation	25	3,130,000
Deduct nonrecurring construction projects		−3,130,000
1959 base		0
1959 appropriation request	25	2,374,000
Net change requested		+2,374,000

	1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount
Increases:				
Additional funds required for completion of previously approved projects in categories as follows:				
Health centers and clinics		$99,600		$99,600
Personnel quarters		714,000		714,000
Hospital modernization program		1,560,400		1,560,400
Aid to community hospitals serving Indians and non-Indians pursuant to Public Law 85-151		0		750,000
Total change requested		+2,374,000		+3,124,000

[1] The positions are scheduled under a contract allocation to the Department of the Interior and are not assigned directly to the activities; duties are performed in connection with the individual projects within all activities.

EFFECT OF HOUSE ACTION

The House action provides $3,124,000, an increase of $750,000 over the $2,375,000 request.

The increase of $750,000 would implement Public Law 85–151 which provides for the Indian health program to participate in construction or remodeling of community hospitals for use of both Indian and non-Indian patients. Where feasible, use of these funds would help integrate the Indian with the surrounding community and decrease the need for construction of Federal hospital facilities for Indian beneficiaries.

The House action deleted appropriation language which provided for the merging of all prior year balances and the fiscal year 1959 appropriation into a single fund and extending the availability of all appropriated construction funds to June 30, 1960.

The extension of availability beyond the end of fiscal year 1959 for all appropriated construction funds is considered to be extremely important. Minimal funds appropriated through 1958 will be required in fiscal year 1960 in connection with contracts being administered for the Public Health Service by the Branch of Plant Design and Construction, Bureau of Indian Affairs, for contingencies to cover unforeseen construction costs, and to cover costs for administration of contracts in force and supervision and inspection of construction performed in 1960.

REDUCTION IN REQUEST

Senator HILL. Now, you asked for $6,200,000 for construction, did you not?

Dr. SHAW. Yes, sir.

Senator HILL. Which was reduced, and you might briefly tell us where that new construction would have gone and supply a more detailed statement on it for the record.

Dr. SHAW. That $6,200,00 request would have involved 23 new or replacement clinics in the field where they are exceedingly important and badly needed. It would have provided 111 housing units against a known need of over a thousand units.

Then there is $3,496,000 for the modernization of four of the older hospitals and lesser alteration projects. All of these projects were eliminated, and the construction budget does not include any new projects. They did allow $2,374,000, which is the construction budget before you, to complete previously authorized projects where the funds were inadequate and where the costs have increased to a point where new funds are required in order to proceed at all. The budget that we are requesting makes this provision, except for $3,090,000 required to complete the four hospitals previously authorized.

In this respect, I might say that we had many frustrating experiences in regard to the hospitals, the main one being at Kotzebue, Alaska, which is above the Arctic Circle. The problems had to do with the rigors of the climate, the amount of permafrost and the available water. In order to operate a modern hospital, it required a year's research on the part of the Arctic Research Center of the Public Health Service in order to determine a method of purifying water from the sound for this operation.

Fortunately, we have now resolved these problems. We have clearance from the Bureau of the Budget on our schematics and we have directed the architects to proceed with the planning.

PROBLEM AT SELLS

In regard to Sells, the matter there was again one of water supply in a desert area. Last week we received confirmation of an adequate supply at a new location of a well which is sufficient to supply the hospital. Only this week we received clearance from the sanitary engineers and the bacteriologists at the laboratories that the water was potable and suitable for our hospital operation. We have instructed the Board of Plant Design and Construction of the Bureau of Indian Affairs to proceed with the negotiation of an architect-engineering contract with an architect to proceed with the planning and construction.

SITUATION AT GALLUP

With regard to Gallup, we now have clearance of the schematic plan by the Bureau of the Budget and we have authority to proceed with the planning and eventual construction of Gallup.

Senator HILL. Have you finished your planning on that yet?

Dr. SHAW. We have clearance of only the schematic plans which have just cleared the Bureau of the Budget. We have authorized the architect to proceed with the preliminary plans.

Senator HILL. How long do you think it will be before they will start construction?

Dr. SHAW. Barring unforeseen difficulties, we anticipate that all of the previously approved projects except Sells will be under contract for construction in fiscal 1959. We have moved ahead very rapidly since July of this fiscal year.

The Shiprock Hospital was put out for bid for construction on March 26. The bid opening will be on June 4, and we anticipate obligating this money and proceeding with construction on Shiprock this summer.

REASONS FOR DELAY

Senator HILL. According to the House report, it took over 2½ years to get those plans, is that right, on Shiprock?

Dr. SHAW. Yes, it did. We admit there was a delay.

Dr. LOWRY. Mr. Chairman, may I speak to that? I have been in the position of having a look and getting to know the program in the last 6 months and I think perhaps I can give you a view of what I saw: First, there were some delays in planning. Second, there was a third party, the Bureau of Indian Affairs, which was to negotiate this business, to try to reconcile the program needs of the hospital with the architect who was designing it; and, as a result of this three-party agreement, the architect would design something which would not be acceptable to the program people. Then it would go back and forth through this third party.

Now, this resulted in delays which we believe we can eliminate by having only a two-party arrangement where we will have, in our own activity, the architect who will work with the architect who gets the contract and be immediately working with the program people. This, we hope, will minimize the delay in this area and stop this going back and forth, and we can try to get the schematics acceptable.

Then, there had been other delays which are within our own Service and Department and there have been delays in getting approval from the Bureau of the Budget and meeting questions that they have raised about the plan.

So there have been delays, and I would say that nobody has been more distressed than the people in the Division of Indian Health, and I think we can show you, within the next year, some remarkable progress.

I think the table you have before you indicates the great deal of work that has been done, but it does not make us satisfied.

Senator HILL. Well, I certainly hope that there can be very definite progress. I do not understand just why there should be all of this delay. In saying that, I am not being critical of the Public Health Service. From what I know of the situation in other places, I can well imagine that there has been a great delay in those other places.

Dr. LOWRY. Senator, I think it is only right to say that some of the delay can be laid at our own doorstep and not at the other people's.

Senator HILL. That is very generous of you to say that, and I am sure if you say it, it is correct; but you would not deny the fact that there has been delay with the other people.

Dr. LOWRY. Senator, I said some of the delay.

Senator HILL. I just wanted the record to be clear on it.

Dr. SHAW. I would like to clear up one point which may be misinterpreted and that is that Sells will not be under contract this year. The construction money for Sells is not included in the budget before you; $244,000 of the Sells' money is being retained for completion of planning, and for the construction and drilling of the well.

The balance of the money is reprogramed for Kotzebue, Gallup, and Shiprock. Therefore, we will not have the money in the 1959 budget for the construction of Sells.

Senator HILL. Not the construction money. How much construction money would you need for Sells in going forward with this construction in 1959?

SUMMARIZATION REQUEST

Mr. KELLY. May I just summarize what Dr. Shaw said, Mr. Chairman?

Senator HILL. Certainly.

Mr. KELLY. The budget before you includes $2,374,000, which is the funds required to proceed with that construction which has already been authorized, but for which we underestimated the cost with the exception of hospitals.

The funds that we presently have for the hospitals will permit us to go ahead with the greater part of the 3 hospitals, and it is anticipater that the 1960 budget will include the funds for the remaining cost, about $3,090,000, to complete all of this which is currently authorized, but for which the estimates were inadequate to complete.

You will recall the Secretary recently advised you of the need for reprograming this because of the overrunning cost estimates.

Senator HILL. If you had the funds for construction of Sells, could you go forward with it this year?

Mr. KELLY. When we developed the budget, we did not believe it would be ready until early in 1960, and it was not necessary to request the funds until 1960.

CONSTRUCTION AT SELLS

Senator HILL. I understand that. That was some months ago. I am speaking of the situation today. If you had the funds for construction of Sells, could you proceed this fiscal year?

Dr. SHAW. Let me ask Mr. Read who heads up the construction program.

Mr. READ. We estimate the plans and specifications would be completed in June.

Senator HILL. This coming June?

Mr. READ. Next year. So, at the end of fiscal year 1959, if we push this to get it under construction, we can do it.

Senator HILL. I have had no experience in construction, but I declare that that seems to be a tremendous delay. It is just a matter of getting the plans.

Dr. LOWRY. Mr. Chairman, would you like to have him give you the details of the expected time for each stage on Sells, how many days for this and how many days for that?

Senator HILL. I wish he would supply that for the record.

Mr. READ. Yes, sir.

Senator HILL. Give us a detailed statement as to why it is going to take over a year, from now until June 1959, to get those plans. I would like to have a detailed statement for the record on that.

Mr. READ. Yes, sir.

(The statement referred to follows:)

There follows typical time study for construction of a new 50-bed PHS Indian health hospital.

New project (hospital, 50 beds):	*Estimated number of calendar days required*
Site selection	45
Site survey	10
Development and review of planning program	39
Preparation of diagrammatics	21
Transfer to BIA (P. D. and C.) of funds for plans and assignment of project	5
Authorize selection of A/E firm	2
Selection of A/E firm	30
Award A/E contract	7
Preparation of schematics by A/E	45
Review of schematics	16
Bureau of the Budget approval of schematics, apportionment of funds	60
Transfer Funds to BIA (P. D. and C.)	5
Preparation of preliminary plans by A/E	47
Review of preliminary plans	16
Preparation of working drawing by A/E	100
Review of working drawings	14
Transfer of construction funds to BIA (P. D. and C.)	5
Invite bids and reproduce documents	62
Bid opening	2
Tabulation of bids	2
Determination of low bidder and recommend contract award	6
Contract award	30
Total calendar days required for planning	569

The following represents the remaining stages and estimated time required to complete the planning for the PHS Indian hospital at Sells, Ariz.

(1) The Branch of Plant Design and Construction, Bureau of Indian Affairs is now in the process of selecting an architect and negotiating an architectural-engineering contract for the design of the hospital. The architect will be selected by the end of April 1958. Request for release of the necessary planning funds by the Bureau of the Budget has been submitted to HEW on April 17, 1958. It is anticipated that the funds will be released and the architectural-engineering contract awarded by the latter part of May 1958.

(2) Schematic drawings will be started in June and completed by the end of July. Approval of these drawings and the release of the required additional planning funds by the Bureau of the Budget should be completed by September 15, 1958.

(3) Preparation of preliminary drawings will be started in the latter part of September and their review and approval should be completed the end of November 1958.

(4) Working drawings and specifications should be started in December 1958 and be sufficiently complete so that a copy of the architectural portion of these plans may be submitted to the PHS, Department, and to the Bureau of the Budget for review and approval by April 1, 1959. Review would require approximately 1 month.

(5) Appropriation by Congress and apportionment by the Bureau of the Budget of construction funds would permit the immediate release and advertising for bids for construction of the projects. Working drawings and specifications could then be reproduced and could be available to bidders within 15 days. The bid opening date would require an additional 45 days.

PURPOSE OF FUNDS

Senator HILL. All right, Dr. Shaw.

Dr. SHAW. The $3,090,000 required to complete the 4 hospitals is for the Sells Hospital construction, for the Sells quarters and furnishings.

for 61 quarters for the Shiprock Hospital and their furnishings, and for the furnishings of quarters at Kotzebue.

Senator HILL. Is there anything else you gentlemen would like to add?

Dr. LOWRY. I would like to tell you a story. I do not know if it belongs in the hearings.

Senator HILL. All right, tell it to us.

Dr. LOWRY. I went on a trip with Dr. Burney and Mr. Miles recently, and visited nine of these Indian hospitals.

Senator HILL. You were on a trip with the doctor?

Dr: LOWRY. Yes.

And we saw how the Indians were demanding services and we could not supply them. One of the Indian gentlemen, Mr. Clinton Kessay, who is chairman of the Apache Tribal Council, was trying to tell us about this, and his command of English was not as good as he would have liked to have it, but he told it in several different ways.

What he was trying to tell us was, how hard our doctors were working as well as our nurses, and he finally summed it up for me by saying, "Our doctor in pine box no good for Indian."

Senator HILL. What he was trying to tell you was that you were working these doctors to death?

Dr. LOWRY. As a matter of fact, he is right. They are working 12 to 14 hours a day, 6 and 7 days a week.

Senator HILL. Well, that story, I think, is most appropriate, I will say, in these hearings in connection with these appropriations of your funds.

HOSPITAL BEDS FOR INDIAN PROGRAM

Senator HILL. You mentioned the problems of utilizing Public Law 85–151 in developing hospital beds for the Indian program, for which purpose the House allowed $750,000 additional. I would like additional and more definitive information concerning the communities and number of hospital beds which will be ready to go this year. Please give me a list of the eligible projects in the order of bed need priority.

Dr. SHAW. We have sent our representatives to the State hospital agencies of those States where participation in this act appeared to be desirable. The following communities are ready to participate in the program:

Service unit community	Total hospital GMS beds	Public Law 85–151 share GMS beds
Fort Peck:		
Wolf Point, Mont	50	9
Poplar, Mont	22	13
White Earth: Mahnomen, Minn	25	9
Fond du Lac: Cloquet, Minn	76	8
Nett Lake: Cook, Minn	18	3
Grand Portage: Grand Marais, Minn	12	2
Hoopa Valley: Hoopa, Calif	15	8
Wind River:		
Lander, Wyo	30	10
Riverton, Wyo	10	5
Fort Totten: Devil's Lake, N. Dak	80	5
Flathead: Polson, Mont	40	8
Total		80

CONSTRUCTION

Senator HILL. Is there anything else you would like to add, Doctor?

Dr. SHAW. Yes, sir. I will provide a detailed statement on construction which you indicated you wanted submitted for the record.

Senator HILL. All right, we will be glad to have that for the record.

(The statement referred to follows:)

Construction funds in the amount of $6,200,000 were recommended for 1959. The Bureau of the Budget allowed no funds for the projects requested, but provided $2,374,000 to cover the increased construction costs of projects other than hospitals that had been authorized in previous years. The estimate submitted to the Bureau of the Budget would have provided for projects as follows:

1. Clinics	$650,000

The estimate covered funds for 9 new and 14 replacement field health stations. The survey of health services for American Indians, submitted to Congress in February 1957, stressed the necessity of expanding the field health program. Such expansion requires the replacement of inadequate health centers and stations, and construction of new facilities where none presently exist. Proposed construction and replacements would have involved the following locations:

	Estimated cost
Location of new clinics:	
Cheyenne River, S. Dak. (west segment)	$25,000
Norris, S. Dak. (near Rosebud)	25,000
Rocky Boy, Mont	25,000
Fort Berthold (west side), N. Dak	20,000
Cheyenne River (east), S. Dak	20,000
Chuechu, Ariz	20,000
Canoncito, N. Mex	20,000
Gambell, Alaska	50,000
Savoongo, Alaska	50,000
Location of clinic replacements:	
Jicarillo, N. Mex. (health center)	50,000
Laguna, N. Mex. (health center)	80,000
Jemez, N. Mex	25,000
San Felipe Pueblo, N. Mex	20,000
Santa Ana, N. Mex	20,000
Tesuque, Pueblo, N. Mex	20,000
Aneta, Utah	20,000
Kaibito, Ariz	25,000
Lukachukai, Ariz	25,000
Mexican Hat, Utah	20,000
Dinnehotoso, Ariz	20,000
Red Mesa, Ariz	20,000
Lake Valley, N. Mex	20,000
Gila Crossing, Ariz	30,000
Total clinics	650,000
2. Personnel quarters	2,054,000

The estimate covered funds for the construction of 111 permanent housing units against the known deficiency of 1,150 adequate housing units. Of the housing units transferred to the Public Health Service on July 1, 1955, many did not meet the minimum standards for occupancy and the number was grossly inadequate to supply the necessary housing for the minimal health staff. Nevertheless, many of these inadequate and poorly constructed facilities provided emergency shelter and were continued in use for health employees already living in them as well as for new employees appointed after the transfer. Some of the facilities are over 40 years of age, and do not meet minimum sanitation requirements, electrical wiring, heating, and sewage-disposal standards.

Because of the remoteness from established communities, the isolation of many of the locations where Indian beneficiaries live, and lack of public or private transportation, it is necessary for the Service to provide housing facilities in order to recruit and retain personnel of practically every category.

Experience indicates that employees with families are better able to adjust to such conditions than are single individuals. Employees with families increase the need for housekeeping facilities. Proposed construction would have involved the following locations:

Facility		Housing units			Cost estimate
Location	Type	Number	Size	Type	
Aberdeen area:					
Belcourt, N. Dak	Hospital	4	2-bedroom	Duplex	$60,000
Rosebud, S. Dak	do	8	do	do	120,000
Pine Ridge, S. Dak	do	8	do	do	120,000
Fort Yates, N. Dak	do	2	do	do	30,000
Total, Aberdeen area		22			330,000
Albuquerque area:					
Fort Defiance, Ariz	Hospital	2	3-bedroom	Duplex	34,000
Tuba City, Ariz	do	1	do	Detached	19,300
		2	2-bedroom	Duplex	30,000
Pueblo Pintado, N. Mex	Health station	2	do	do	30,000
Ganado, N. Mex. (Cornfields).	do	1	3-bedroom	Detached	19,300
		2	2-bedroom	Duplex	30,000
Chinle, Ariz	Health center	1	3-bedroom	Detached	19,300
		4	2-bedroom	Duplex	60,000
Kayenta, Ariz	do	1	3-bedroom	Detached	19,300
		2	do	Duplex	34,000
		2	2-bedroom	do	30,000
Dennehotso, Ariz	Health station	2	do	do	30,000
Round Rock, Ariz	do	1	do	Detached	17,800
Indian Wells, Ariz	do	2	do	Duplex	30,000
Zuni, N. Mex	Hospital	1	3-bedroom	Detached	19,300
		2	2-bedroom	Duplex	30,000
Dulce, N. Mex. (Jicarilla)	Health center	2	do	do	30,000
Laguna, N. Mex	do	1	3-bedroom	Detached	19,300
		2	2-bedroom	Duplex	30,000
Total, Albuquerque area		33			531,600
Oklahoma City area: Clinton, Okla.	Hospital	1	3-bedroom	Detached	19,300
Phoenix area:					
Whiteriver, Ariz	do	2	2-bedroom	Duplex	30,000
Keams Canyon, Ariz	do				
Toreva, Ariz	Health station	8	do	do	120,000
Parker (and Poston), Ariz	Hospital and station.	1	3-bedroom	Detached	19,300
		2	2-bedroom	Duplex	30,000
San Carlos (and Bylas), Ariz.	Hospital and center.	1	3-bedroom	Detached	19,300
Schurz, Nev	Hospital	2	2-bedroom	Duplex	30,000
Santa Rosa, Ariz	Health center	2	do	do	30,000
Sells, Ariz	Health center and new hospital.	10	Varying sizes.		160,000
Total, Phoenix area		28			438,600
Portland area:					
Harlem, Mont	Hospital	1	3-bedroom	Detached	19,300
		2	2-bedroom	Duplex	30,000
Browning, Mont	do	2	do	do	30,000
Dixon, Mont. (Flathead)	Health station	1	do	Detached	17,800
Total, Portland area		6			97,100
Total United States housing.		90			1,416,600
Alaska:					
Kanakanak	Hospital	1	3-bedroom	Duplex	98,000
		1	2-bedroom		
		11	Varying	Quarters building.	147,400
Mount Edgecumbe	do	4	2-bedroom	Duplex	196,000
Point Barrow	do	1	3-bedroom	do	98,000
		1	2-bedroom		
Tanana	do	1	3-bedroom	do	98,000
		1	2-bedroom		
Total, Alaska housing		21			637,400
Total, personnel quarters		111			2,054,000
3. Alterations					3,496,000

The estimate covered a modernization program of $2,860,000 and other alterations amounting to $636,000. Hospital modernization projects would have been provided at the following locations:

San Carlos, Ariz	$582,000
Winslow, Ariz	947,000
Crownpoint, N. Mex	866,000
Turtle Mountain, N. Dak	465,000
Total	2,860,000

In addition to the hospital modernization program the estimate provided funds for alteration projects of a less comprehensive nature in the following areas:

Aberdeen	$243,700
Albuquerque	68,000
Oklahoma City	204,600
Phoenix	60,200
Portland	59,500
Total	636,000

Selection of the hospitals to be modernized was based on the inaccessibility of community medical facilities and the necessity to provide hospital care to the neighboring Indian population until the Indian is more fully integrated into the surrounding cultural pattern. Modernization rather than replacement was recommended since a modernization program would allow operation of the facility during construction. Each modernization project would have included the construction work and equipment required to conform with minimum Hill-Burton program requirements.

Senator HILL. We thank you gentlemen very, very much. You have given us a lot of information, and we appreciate it.

The committee will now stand in recess until 10 in the morning.

(Thereupon, at 12:10 p. m., Wednesday, April 16, 1958, the hearing was recessed, to reconvene at 10 a. m., Thursday, April 17, 1958.)

LABOR—HEALTH, EDUCATION, AND WELFARE APPROPRIATIONS, 1959

THURSDAY, APRIL 17, 1958

United States Senate,
Subcommittee of the Committee on Appropriations,
Washington, D. C.

The subcommittee met at 10 a. m., pursuant to recess, in room F–82, the Capitol, Hon. Lister Hill (chairman of the subcommittee) presiding.

Present: Senators Hill, Smith, and Dworshak.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

STATEMENT OF ELLIOT L. RICHARDSON, ASSISTANT SECRETARY, ACCOMPANIED BY JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

Secretary's Prepared Statement

Senator Hill. The subcommittee will kindly come to order.

We are very happy to have with us the Assistant Secretary, Mr. Elliot L. Richardson, Department of Health, Education, and Welfare. Mr. Richardson, we will be glad to have you make the statement you see fit.

Mr. Richardson. Thank you, Mr. Chairman.

I would just like to state, on behalf of Secretary Folsom, the reason for his not being able to meet with you today.

As you know from his telephone call to you yesterday, he has an illness which the doctor felt made it important for him to take a few more days of rest away from Washington, so I have come here this morning simply to file with the subcommittee this statement which he had prepared for presentation to you. He has gone over this statement himself very carefully and I know he would, at any future date convenient to you, be glad to respond to any questions the committee may have about it.

If you care to go into any questions now, of course, I will be glad to do my best to answer them. There is only one point in this statement which I would like to give particular emphasis to at this time.

Senator Hill. All right, sir, proceed.

COST OF RESEARCH

Mr. Richardson. That concerns the matter of full indirect cost of research. This is a matter which is strongly stressed in the statement. I would only like to add that it is also a subject which was of concern

to the President's Committee on Education Beyond High School as well, and that Committee also strongly recommended that under the research programs conducted through the National Institutes of Health it would be of great value to the educational institutions concerned to have included full indirect costs. What we are urging is, as appears on page 22 of the Secretary's statement, that the increase of $8,200,000 allowed by the House for medical research funds through the National Institutes of Health be made available for purposes of indirect costs and that the language restricting the use of the funds for that purpose be eliminated from the bill.

Senator HILL. If I may say this, Mr. Secretary, in my conversation over the long-distance telephone yesterday with the Secretary, he emphasized this whole matter you have emphasized to us here this morning.

I know his deep interest as is expressed by him. And also as he expressed it to us yesterday on the phone.

Is there anything you would like to add?

Mr. RICHARDSON. No, Mr. Chairman.

Senator HILL. May I thank you, sir, for coming here this morning and presenting the Secretary's statement. We will certainly go over it carefully.

He said that he expected to be back in a few days. I am very happy to know that he is getting alone fine and will be back on the job in a few days, so after we go over this statement if there are any questions we will advise you; and, as he said, he would be happy at some later date to come and answer any question that we might have.

Mr. RICHARDSON. Thank you very much, Mr. Chairman.

Senator HILL. So you convey to him our best wishes and tell him to be sure to do what his doctors tell him and I repeat we are delighted he is almost well and we look forward to seeing him shortly.

Mr. RICHARDSON. Thank you very much, Mr. Chairman. I appreciate the opportunity I had to present this matter before you.

Senator HILL. Mr. Secretary, I know you are a very busy man, but would you like to stay to hear this testimony? I imagine you have no other questions?

Mr. RICHARDSON. No; but I might stay for a little while.

Senator HILL. All right, just make yourself at home. We would be very happy to have you if you would like to stay.

Mr. RICHARDSON. I would like to for a little while.

Senator HILL. The full statement will be put in the record at this point.

(The statement referred to follows:)

STATEMENT OF SECRETARY OF HEALTH, EDUCATION, AND WELFARE

Mr. Chairman and members of the committee, this is the first opportunity I have had to meet with this committee since the Congress considered and acted upon last year's budget of the Department of Health, Education, and Welfare. I would like to express my appreciation to the committee for its thorough and thoughtful consideration and support of the Department's 1958 budget.

Many changes have taken place during the past year—changes which have demonstrated the need for increased emphasis upon programs affecting our national security. It is obvious that first priority must be given to our defense effort, particularly in the fields of technology and science. We must do this without impairing our economy and without sacrificing our gains in other areas which are also vital to our security—many of which are of direct concern to the Department of Health, Education, and Welfare.

In order to reflect this change in emphasis, a thorough reexamination of all Federal programs and activities was made in the development of the 1959 budget. The basic merit and need for the programs of health, education, and welfare were recognized in this review, and despite the need for unusual economy, the President's 1959 budget, as amended, including the costs of proposed legislation, recommends support for these programs which, in the aggregate, is $100 million higher than the level of appropriations in 1958.

SUMMARY OF 1959 BUDGET

The President's budget for 1959, as amended, recommends appropriations totaling $2.84 billion for the programs administered by the Department, including the cost of new legislative proposals. This compares with $2.74 billion in funds actually appropriated or requested as supplemental appropriations in the current fiscal year.

The budget estimates expenditures to be $2.85 billion in 1959 compared with $2.75 billion in 1958 and $2.3 billion in 1957.

In presenting the highlights of the 1959 budget program for the Department, I will address myself to the budget requests before you to carry out our existing legislative responsibilities included in the budget as amended. I will then comment briefly on the House action on our 1959 budget and present my recommendations to the Senate for amendments to the House approved bill.

EXISTING LEGISLATION

The 1959 appropriation request for existing legislation is $42.6 million more than the 1958 comparable amounts for these programs. This comparison excludes the expiring Federal-impact school assistance programs in both years since they are treated as new legislation in 1959.

NET BUDGET CHANGE

The principal elements occasioning the budget changes, both increases and decreases, are:

Strengthening of educational research and services	+$900,000
Decrease in grants for library services	−2,000,000
Expansion of the program of vocational rehabilitation	+4,570,000
Lowered Federal financial participation in tuberculosis control	−1,500,000
Provision of mental health facilities in Alaska	+6,500,000
Increased requirements for public assistance grants	+35,800,000
Funds to carry out our civil defense responsibilities	+820,000
All other budget changes, net	−2,479,800
Total	+42,610,200

ANALYSIS OF BUDGET PROGRAM BY OPERATING AGENCY

There follows a brief description of the 1959 budget program and significant changes by operating agency as it relates to existing legislation. Civil defense and direct Federal construction activities which affect more than one operating agency are discussed separately on a departmentwide basis.

Operation of affiliated institutions, +$327,000

The 1959 budget continues support for affiliated institutions, American Printing House for the Blind, Gallaudet College, and Howard University, in accordance with policies pursued jointly by the executive branch and the Congress for the past several years. Increases for all three are requested in 1959 to enable them to meet their growing responsibilities and to fulfill commitments made in previous years.

The American Printing House for the Blind is budgeted at the maximum authorization to accommodate increased enrollments of blind students.

In recent years Federal Support of Gallaudet College and Howard University has been increased. As a result of this strengthening, Gallaudet College has now attained accredited status and Howard University has recently had its accreditation reaffirmed. The budget requests a small increase for Gallaudet College to continue strengthening of its curriculum and to provide additional services for its enlarged physical plant. Howard University is budgeted for ad-

ditional funds primarily to support an enlarged medical and dental training program and to provide merit salary increases for particularly qualified members of the faculty.

Food and Drug Administration, +$110,000

To enable it to discharge its important responsibilities, the Food and Drug Administration received increases in both personnel and funds in fiscal years 1957 and 1958. These increases were based on the Citizens' Advisory Committee report which recommended substantial additional support for consumer protection against harmful, unsanitary, and falsely labeled foods, drugs, and cosmetics.

The expansion of the inspectional and enforcement programs that was attained under these increases is continued under the 1959 budget request together with initial staffing of the new Detroit district office for which preparatory work was authorized in 1958. In addition, the budget provides for continuing the program of replacement and modernization of obsolete equipment.

Provision is also made in the budget for funds to carry out related civil defense activities which will be discussed later.

Office of Education, —$1,100,000

In recent years, the Office of Education has expanded its program of advisory and consultative services, initiated a program of cooperative research, and has been able to improve its collection and dissemination of timely statistics and information concerning the status of educational activities. The 1959 budget requests increased research and operating funds of $950,000 so that additional resources can be devoted to broaden and accelerate these activities as they relate to State and local school systems, higher education, and international education. For example, the budget requests an increase of $333,000 to double the Office's professional staff available to aid States and institutions to cope with current and impending problems in higher education. These problems will be severely aggravated by future large increases in enrollments.

The cooperative research program which supplements the Office staff activities has begun to produce results from the studies initiated in fiscal year 1957. During 1957 and 1958, the Office has worked with research investigators throughout the country to identify and plan studies having national significance. Underway at the present time are projects which will attempt to answer such questions as why students drop out of high schools and why secondary school graduates with high abilities do not continue their education; already completed are projects which increase our knowledge of the learning process and suggest better methods of training and teaching mentally retarded children. The budget request provides for continuation of projects already under contract and includes additional funds for the initiation of a substantial number of new projects.

The increases outlined above are offset in part by a reduction in this current budget request of administrative expenses related to the program of assistance for operation of schools in federally impacted areas which is scheduled to expire June 30, 1958. Legislation extending this program will require submission of a supplemental appropriation request for these administrative expenses together with the necessary grant funds.

The 1959 budget continues at the same level as in 1958 the educational grant programs for vocational education and for land-grant colleges. A $2 million reduction is proposed in the grants for library services, bringing the Federal support for this activity to the same level as was requested last year.

Office of Vocational Rehabilitation, +$4,570,000

The expanded Federal-State program of vocational rehabilitation is making substantial progress in providing improved and increased services to the handicapped. In 1957, a record number of disabled persons, approximately 71,000, were rehabilitated through the public program and an additional 80,000 rehabilitations are forecast in 1958. In addition to the provision of proven and generally accepted services, a program of research is conducted through grants directed toward new rehabilitation techniques. Through a selected series of projects launched in 1957 and continued in 1958, research findings and promising rehabilitation techniques are demonstrated in actual practice, selected groups of severely disabled persons are rehabilitated, and the way is opened for the widespread application of the findings.

An increased and improved supply of competent personnel in all related disciplines is required to further expansion of rehabilitation services. In further-

ance of this objective, the 1958 appropriation provides funds for almost 200 teaching grants to institutions and approximately 2,300 grants for training individuals, including about 1,400 short-term traineeships.

The 1959 budget continues the policy of program expansion in order that an increased number of disabled persons may be assisted in their attempt to become productive and self-reliant members of society. The appropriation request, which is an increase of $4.6 million above 1958, is expected to result in 85,000 completed rehabilitations, and to continue the research and training programs at the levels which will be attained this year.

Public Health Service, +$4,695,000

The programs of the Public Health Service have undergone substantial changes during the past few years. Important new programs have been added to the Service's responsibilities and substantial expansions have occurred. During the past year and a half, to cite a few examples, the Public Health Service has acquired responsibility for the programs of training public-health personnel and nurses, administering grants for construction of waste-treatment works, and grants for construction of health-research facilities; the National Library of Medicine was placed under its supervision; and major program expansions have occurred in such areas as medical research, health of the aged and chronic diseases, and air and water pollution research and control. Further, the Service has been extensively engaged in polio prevention and control of widespread influenza epidemics.

The 1959 budget proposes with certain exceptions that operations be continued at the same levels as those achieved in the current fiscal year. The budget recommends continuation of the expanded general health grants, with emphasis on the use of funds for chronic diseases and aging. Provision is made for $6.5 million for construction of mental-health facilities in Alaska.

Communicable-disease research and control activities are budgeted at 1958 levels, except for nonrecurring costs related to the influenza epidemics. A reduction of $1.5 million is proposed for tuberculosis control grants in recognition of the progress made in recent years in the treatment and control of this disease. Air and water pollution research and control programs are recommended at the expanded level authorized in the current year.

The Public Health Service, as well as State and local health departments, must better prepare themselves to deal with the public-health hazard of radiation exposure. There is general concurrence by public-health authorities that this is in the forefront of emerging public-health problems. To deal with this important subject, an increase is requested for radiological health activities from $393,000 in 1958 to $608,000 in 1959. This increase will permit extension of research, technical assistance, and training efforts in this field.

Grants for construction of waste treatment works are recommended for an additional year at the 1958 level of $45 million.

The budget, as amended, requests grants for hospital construction in the amount of $121.2 million, the same level as 1958.

The medical research program of the National Institutes of Health is budgeted at a level which continues the same total appropriations as were provided in the current year. This appropriation request of $211.2 million is $28.2 million above 1957 and $112.7 million greater than the 1956 appropriations. Although it is proposed to continue the total current levels for medical research activities, the 1959 budget proposes several changes in the distribution and application of these funds.

The third in the series of planned increases of $500,000 is provided for the senior research fellowship program. Several adjustments are made among the programs to achieve better balance, including a $500,000 reduction for the national mental health survey which is being completed this year.

The most significant change proposed in the medical research program is the deletion of the 15-percent limitation on the payment of indirect costs associated with research grants and the recommendation that full indirect costs be paid, estimated to average 25 percent of direct costs. This policy will increase the payments for indirect costs by $6.8 million in 1959. It is my considered opinion that the adoption of this recommendation by the Congress will, in the long run, further the medical research effort of the Nation and will increase the potential for greater research accomplishments. The backbone of our research program is found in the Nation's educational institutions. The great increase in sponsored research has had a profound effect on these institutions, and in many instances has materially affected their budgets and programs. Continued de-

velopment of a strong and healthy research effort is dependent upon equally strong and healthy educational institutions, both as to program and finances. Failure to pay for the full cost of sponsored research is having an adverse effect on these institutions and is diverting their limited resources to support these research efforts of national significance at the expense of their basic educational responsibilities.

They have cooperated to the fullest extent in expanding their research activities at the Government behest and in their own desire to find the causes, cures, and preventions of the ills which beset man. We simply cannot afford to continue to pursue a policy which may jeopardize the quality and quantity of scientific education. In this connection, I should like to mention the work of a group of distinguished consultants who are currently reviewing the medical research and related programs of the Department. As you were advised at the time of their appointment last August, we asked these consultants to look into such matters as the impact of the expanding research program on medical education, the availability of scientists, technicians, and facilities, the relationship between Federal and private research programs, and other appropriate questions of policy or administration.

The group has been hard at work since early last fall and it appears that they will need to continue their studies for some months before they complete their work. So far, they have made only one recommendation to me, transmitted in November in the form of a unanimous resolution. The resolution advocated the payment of full costs by the Federal Government in connection with health and medical research work. I was glad to have this clear and strong corroboration, from such a group of outstanding men, of the policy of paying for the full costs of research done by the numerous educational and other private nonprofit institutions which perform such a large part of the medical research done in this country.

I strongly urge the removal of the limitation on payment of indirect costs.

In the provision of medical services and operational responsibilities of the Service including the operation of the Public Health Service hospitals, the conduct of the Indian health program, operation of Freedmen's Hospital, and in carrying out the foreign quarantine responsibilities, the 1959 budget provides for approximately the same level as authorized in 1958. Minor increases occur in several programs to provide for full-year cost of 1958 program expansions.

St. Elizabeths Hospital, +$68,200

In formulating the budget for St. Elizabeths Hospital, staff of the hospital and the Department met with representatives of the District of Columbia as suggested by this committee. The 1959 budget reflects the results of these consultations and is fully supported by the District of Columbia. Modest increases to provide for the most urgent needs of the hospital in the care and treatment of its 7,000 patients are requested. In order to obtain an objective evaluation of the long-range needs of the hospital, an appraisal of staffing and patient care requirements has recently been made by a group of distinguished consultants. The results of this review are being analyzed by the hospital, the Department, and the District of Columbia and will materially assist us in our future budget planning.

Social Security Administration activities

Public assistance activities, +$35,940,000.—The largest single request for funds for this Department will provide the Federal share of financing the joint Federal-State programs of old-age assistance, aid to dependent children, aid to the blind, and aid to the permanently and totally disabled. Extensive amendments to the Social Security Act in 1956 and 1957 increased the Federal share of payments to recipients under all programs and established alternative methods of financing medical care costs. These amendments, together with rising caseloads in all but the old-age assistance program, and increased average payments to recipients, have resulted in the need for a supplemental appropriation of $170,600,000 in 1958 and an appropriation in 1959 $35,800,000 above the 1958 level for public assistance grants.

In connection with the request of the Congress, the Department had undertaken a comprehensive study of State and local administrative costs. A report of this study and its relationship to the administration's long-range proposals for Federal-State financial participation in public assistance has been submitted to the committee.

A small increase is requested for the Federal administration of public assistance grants so that our responsibilities for insuring economical and efficient use of these funds can be better fulfilled and so that the Department can work

with State agencies to attain more fully the goals of self-help and self-care established by the 1956 amendments.

Children's Bureau activities, +$163,000.—The bulk of the increased appropriations requested for the Children's Bureau will provide funds for the establishment of a staff to organize and service a White House Conference on Children and Youth scheduled to meet in March 1960. This Conference, which has been held once a decade since 1909, will provide a renewed focus of attention and effort for over 500 national voluntary agencies and the Federal Interdepartmental Committee on Children and Youth in their attempts to gather information and recommend action in matters concerning children and youth.

In 1956, several million children were provided services under the program of Federal grants to States for maternal and child health and welfare services. In addition, in 1958, the Children's Bureau, through its grant program, services and consultation with States, localities and interested voluntary agencies, will give special emphasis to the care of mentally retarded children, prevention and control of juvenile delinquency, and social services for children.

These activities and services will be continued at substantially the same level under the funds requested in the 1959 budget.

Old-age, survivors and disability insurance programs

The funds requested in 1959 for the administrative expenses of the old-age, survivors and disability insurance programs are derived from trust funds which are excluded from the regular budget. As coverage of individuals under these systems expands and benefit requirements are liberalized, total expenditures for benefit payments increase. In fiscal year 1957, $6.5 billion in benefit payments were made to 10.7 million individuals. During 1959, it is anticipated that $8.7 billion will be paid to 12.9 million beneficiaries.

$133.3 million is requested for the administrative expenses of the Bureau of Old-Age and Survivors Insurance, in 1959, a net decrease of $5.4 million from the 1958 level including the supplemental request. The net decrease is due primarily to lowered claims workloads from the initial heavy claims workload which resulted from the 1956 amendments and is based on the workload projections we made when the 1959 budget was developed. The budget also gives effect to nonrecurring 1958 items, and procedural and productivity improvements.

The total estimated administrative cost of the Bureau in 1959 is approximately 1½ percent of the total benefit payments. This indicates, I believe, our continuing concern for the careful management of these trust funds.

Office of the Secretary, +$272,000.

The Office of the Secretary budgeted activities are projected at approximately the same level in 1959 as in 1958. Officials of the Office of the Secretary having direct responsibility for these programs will discuss the details of these requests later with the committee.

As I indicated earlier, there are two aspects of the budget which I would like to treat on a Departmentwide basis, namely, civil defense activities and direct Federal construction.

Civil defense activities

From fiscal year 1955 through fiscal year 1957 the Department conducted extensive activities related to the improvement of the Nation's capacity for civil defense. These activities, with one exception, were suspended when Congress deleted funds for delegate agencies in the 1958 Federal Civil Defense Appropriation Act. In accordance with a Governmentwide policy, the 1959 budget for each operating agency having substantial civil defense responsibilities includes funds to perform civil defense functions.

The budget includes $820,000 for this purpose. Of this amount, $130,000 is a comparable transfer from the appropriation "Operations, Federal Civil Defense Administration" to the appropriation "Surplus Property Utilization." This transfer of the funds necessary for administration of the distribution of surplus property for civil defense purposes was approved by the House.

The balance of the budget request, $690,000, is for resumption of civil defense preparedness activities related to health, education, and welfare. The House disapproved this request, reaffirming the position taken by the Labor-Welfare Appropriations Subcommittee that these funds should be consolidated with all other departments and agencies and considered as an entity in connection with appropriation requirements of the Federal Civil Defense Administration.

The President has recently submitted a budget amendment to the Senate consolidating civil defense budget requirements of delegate agencies and requested their consideration in connection with the operating appropriations for the Fed-

eral Civil Defense Administration. This has the effect of amending the budget for the Department of Health, Education, and Welfare by eliminating the request for $690,000 for civil defense activities. This in no way changes the need or importance of the Department's participation in civil defense preparedness, but merely requests that funds be included in a different bill where similar fund requirements are considered.

Direct Federal construction, —$2,424,000

At the time of our appearance before this committee last year we indicated that all but the most urgently needed construction projects were being deferred. A number of projects for which appropriations had heretofore been made were included in this category. Since that time those projects on which planning was completed have been individually reviewed. We have been authorized to proceed with the Old-Age and Survivors Insurance Building in Baltimore, the Biologics Standards Building, and the new surgical facility at the National Institutes of Health, the Auditorium-Fine Arts Building at Howard University, and the Indian health hospital located at Shiprock, N. Mex.

The only other projects for which funds have been appropriated are three Indian health hospitals, and funds for the construction of clinics, health centers, quarters, and alterations of facilities in the Indian health program. These will be individually reviewed as plans and specifications are completed.

The priority of defense requirements occasioned a general governmentwide policy of restricting new construction starts in 1959. However, the budget does request funds for planning replacement of inadequate and outmoded facilities. Planning funds are requested for completion of plans for a physical education building at Howard University, for planning the fourth and final stage of the Gallaudet College building program, and for preliminary plans for a 450-bed treatment building at St. Elizabeths Hospital. Construction funds are also requested for the Indian health program in order to complete presently authorized construction of clinics, health centers, personnel quarters, and alteration of facilities. Experience to date has shown that our earlier estimates of costs were inadequate.

EFFECT OF HOUSE ACTION

The House in acting on the 1959 budget request for the Department approved funds in the amount of $2,565,080,581. This represents a net increase of $14,356,000 over the budget request. This net change consists of increases amounting to $16,071,000, offset by decreases in the amount of $1,715,000.

The House Appropriations Committee in recommending this action, which was subsequently approved by the House, included comments in the accompanying report of a critical nature.

Thoughtful and sincere men will differ in the amount and type of emphasis which the Federal Government should give in these important programs of health, education, and welfare which touch the lives of all Americans. When examined in terms of the total budget and viewed in perspective, it will be found that only minor differences exist. The report, however, raises questions about the sincerity of the motives of those who assist the President in formulating his budget recommendations and of those who developed the format and mechanics of the budgetary presentation. I am convinced that such questions are unwarranted.

No one questions that there are many programs and activities in the fields of health, education, and welfare which are meritorious and could be effectively expanded, given greater emphasis, or where new approaches could be initiated that would be beneficial. It is, of course, impossible in developing an overall budget program for the United States Government which must give effect to both income and expense, weigh the relative importance of national security and domestic programs, and consider the impact of the budget on the national economy, to include all desirable programs and activities or to finance all of the programs and activities at the level desired by the principal advocates. The budget must, of necessity, deal with high-priority items and be selective as to the inclusion of programs and as to the level of financing for those that are included.

As I pointed out earlier, the development of the 1959 budget had to give high priority and special emphasis to the needs of national security. To do this, all programs were subjected to careful appraisal. We in the Department are pleased and encouraged that the program for which we have responsibility measured up so well in this review. The budget, as amended, provides for

appropriations approximately $43 million greater than the comparable amount in the current year under existing legislation and considerably more than the comparable amounts in 1956 and 1957. We believe these recommendations were made by the President on the advice of the most careful and thoughtful analysis of his budget advisers.

The House report criticized the method of presenting the figures on public assistance grants and calls attention to the differences in the Department's presentation and the President's budget. This is a technical matter and relates to the difference between "new obligational authority" and appropriation requirements. This caused confusion which we hope to avoid in the future but certainly was not intended to be misleading. A rather full explanation of the technicality was included in the budget document. The House has enacted language designed to avoid a repetition of this problem in the future. We, too, are anxious to improve the method of presentation of the requirements for the public assistance programs and are confident that this can be worked out within the authority of existing legislation. The proposed appropriation language has an unnecessary and undesirable impact on the procedure of granting funds to States. It is therefore recommended that this language not be adopted.

The House report is critical of the failure to submit budget amendments to meet the change in conditions which has developed since the 1959 budget was developed. The report refers to my desire to avoid a series of budget amendments. This refers to a letter which I addressed to the House committee advising them of the budget amendment for hospital construction grants, and pointing out that two of our appropriations were sensitive to a downtown in the economy—"Grants for public assistance" and "Salaries and expenses, Bureau of Old-Age and Survivors Insurance." I indicated at that time and I continue to feel that we have inadequate information of the impact on these two accounts of the economic downturn to forecast realistically the magnitude of change in budget needs. This was clarified on the floor of the House by the inclusion of the exchange of correspondence in the Congressional Record.

The House report criticizes our lack of emphasis in the field of aging and points out that the Office of the Secretary budget does not treat the Special Staff on Aging as a major subdivision of the budget. We do consider it a major activity and will in future budget submissions separately identify this staff. However, of much greater importance in the field of aging than the Special Staff on Aging is the whole range of activities carried on by the Department that relates to this important segment of our population. Our Department, with its numerous activities concerned with older persons, has had, in recent years, a special interest in constructive activities aimed toward greater self-reliance of such persons. In order that the Congress might be fully informed on our activities related to aging, a special report was prepared and has been made available to the House Appropriations Committee and to your committee in recognition of the special interests which have been evidenced in this area. I believe that a reading of this report will show that our Department has not failed to emphasize this area.

INCREASES ALLOWED BY THE HOUSE

The increases over the budget estimate allowed by the House are as follows:

Grants for library services	$2,000,000
Grants to States and other agencies for vocational rehabilitation allottment base)	(3,000,000)
Hospitals and medical care	421,000
Construction of Indian health facilities	750,000
National Institutes of Health	8,200,000
Construction of dental research building	3,700,000
Grants to States for maternal and child welfare	1,000,000
Total	16,071,000

All of these increases are for meritorious programs and activities. Of the total, $4,780,000 relates to construction and represents advancing of expenditures which would probably be recommended in some subsequent budget period and in that sense cannot be viewed as budgetary increases that raise the level of operations for the Department. The remaining increases are not large in terms of their relationship to the total budget. It is, therefore, recommended that the

Senate accept the increases as proposed by the House. However, with respect to the increases allowed by the House for the National Institutes of Health, it is recommended the funds not be applied as recommended in the House report but rather be used to support the full cost of research supported by grants. The House proposes to continue the limitation contained in the current year appropriation which restricts the payments for indirect cost of research to 15 percent of the direct cost.

As I pointed out earlier, I believe that in order to further the medical research potential of the Nation without impairing or adversely affecting the instructional capacity of our educational institutions we must modify our policies which now support less than the full cost of the research which we undertake to finance. With the increase of $8,200,000 allowed by the House, it will be possible to provide for payment of full indirect cost and still finance the direct cost of research at substantially the level authorized for the current fiscal year. While I have already stated my reasons for recommending support of full indirect costs, I cannot overemphasize the importance which I attach to this policy. I firmly believe that the long-range effect of this policy will be of far greater importance to a sound medical research program than will result from the application of these funds to the increases recommended by the House. I therefore recommend deletion of the limiting language.

REDUCTIONS MADE BY THE HOUSE

The reductions in the budget estimate made by the House together with the restoration requested are as follows:

	House reduction	Restoration requested
Food and Drug Administration: Salaries and expenses	$110,000	0
Howard University:		
Salaries and expenses	100,000	$100,000
Plans and specifications	48,000	0
Office of Education:		
Technical assistance by HHFA-school construction	100,000	100,000
Salaries and expenses	150,000	100,000
Public Health Service:		
Assistance to States, general	889,000	574,000
Sanitary engineering activities	90,000	90,000
Salaries and expenses, hospital construction services	20,000	0
Salaries and expenses, Public Health Service	65,000	0
Social Security Administration:		
Salaries and expenses, Bureau of Public Assistance	60,000	0
Salaries and expenses, Children's Bureau	13,000	0
Office of the Secretary:		
Salaries and expenses, Office of the Secretary	10,000	0
Office of Field Administration	60,000	0
Total	1,715,000	964,000

Restoration of the full amount of the estimate is requested except for (1) the $690,000 requested for civil defense which has been resubmitted for consideration in connection with another bill as discussed earlier, (2) the $48,000 reduction for plans and specifications for Howard University, which reduction relates to a later estimate, and (3) the $13,000 reduction in the Children's Bureau. Restoration of the $964,000 is therefore requested. We believe that the budget estimates were well considered and covered meritorious high priority items which are deserving of congressional approval. The following paragraphs briefly summarize the reasons for requesting restoration.

Howard University, salaries and expenses

The House decreased the budget estimate by $100,000. The House report indicates the committee is pleased that Howard University has had its accreditation reaffirmed and indicates that the committee desires to support the university as a first-class institution. This is also our desire but we believe that the $100,000 reduction in the budget estimate will impede accomplishing that objective. The planned expansion in the medical school enrollment together with the need for certain preventive maintenance work cannot be fully and adequately accomplished with less than the budget estimate.

Office of Education, salaries and expenses

The House reduced the budget estimate, exclusive of civil defense, by $100,000. The House committee report indicated strong support for the functions and responsibilities of the Office of Education and noted the substantial gains which have been made over the past several years. While the House allowance provides for a fairly substantial increase in the Office of Education, it should be noted that the total funds available for the United States Office of Education is a small sum when contrasted with its important responsibilities and the contribution which the Federal Government has the opportunity to make for an improved and effective national educational program.

I feel that it is essential that the Federal Government exert all of its efforts toward assisting States, localities, institutions of higher learning, parents, and students to take advantage of all that we know about better education and to search out new answers to the many problems which face our educational system.

Our higher educational system is already beginning to feel the strain on facilities and staff resulting from ever-mounting enrollments. We must prepare now for a doubling of college enrollments within the next 10 years. Our whole educational system, elementary, secondary, and higher education, is facing the problems resulting from the sizable enrollment expansion and is being subjected to searching inquiry by people all over the Nation as to its content and teaching methods. We, as a Nation, have a new awareness of our educational strengths and shortcomings and of our Nation's needs for people with broad educational background and with specific training in the engineering and scientific fields. We should take advantage of this high degree of interest in our educational system to bring to bear the services which the Office of Education can provide.

The budget before you is, in our judgment, a minimum contribution which the Federal Government can make toward the solution of these problems, and I strongly urge the House reduction be restored.

Technical assistance by HHFA—School construction

The House allowance reduced funds for this purpose from $850,000 to $750,000. As you know, supplemental appropriations have been made in 1958 to cover project applications from federally impacted school districts. We are anxious to proceed as quickly as possible with the construction of these much needed facilities. The Housing and Home Finance Agency performs an essential role in the processing of project applications and in the review of construction. The $100,000 reduction, in the light of the project workload for this activity, requires that we reduce the quality of our performance or delay the provision of these needed facilities. I, therefore, recommend that the House reduction be restored.

Public Health Service, assistance to States, general

The House decreased the estimate in this appropriation, exclusive of civil defense, by $574,000 without comment in the committee report. In 1958 the Congress provided $3 million in additional funds for grants to States to stimulate State and local health agencies in the improvement of local health services, particularly for the aged and chronically ill, and increased funds for direct operations including research into the fields of the chronically ill and aging.

This is one of the foremost problems facing public health authorities today and a great deal of effort is required to provide our increasing aged population with adequate health services. The States have made a good beginning with the increased funds made available this year. We are actively engaged in promising research in this field. A reduction of the magnitude proposed by the House will require that we reduce grants to States by $500,000 below the current year level and limit our own studies to $74,000 below the full-year cost of the level being achieved this year. Nothing can be more damaging to this kind of activity, particularly the Federal-State relationships, than a stop-and-go approach. The failure to provide continuity and a sense of security to States and localities stimulated into new areas occasions a discouragement that can only result in program failure. I therefore strongly urge the restoration of the House reduction.

Public Health Service, sanitary engineering activities

The House reduced the estimate by $90,000 without comment in their report. In order that we can carry forward the important program of radiological health which has heretofore been described, and which constitutes the only increase in sanitary engineering activities other than provision for full-year cost of 1958

activities, it will be necessary, if the House reduction is sustained, to effect a reduction in our activities related to the administration of the waste treatment works construction grants and in the enforcement of interstate water pollution control. During the past several years we have made substantial progress in water pollution control under the provisions of the 1956 act. It would be a backward step to decrease now our energies in this field, particularly with respect to the enforcement problem which has such long-range significance in public health and in the provision of adequate and safe water supplies. I therefore recommend the restoration of the House reduction.

CONCLUSION

In conclusion, may I note that the Department has prepared reports of our progress and plans in areas of special interest to this committee which relate to activities carried on in several of the operating agencies of the Department. I have referred to our report on aging. Reports have also been made available on mental retardation and migratory labor.

I thank the committee for this opportunity to discuss the programs of the Department and our proposals for 1959, and I shall be happy to try to answer any questions you may have.

National Institutes of Health

GENERAL RESEARCH AND SERVICES

STATEMENT OF DR. JAMES A. SHANNON, DIRECTOR, NATIONAL INSTITUTES OF HEALTH, ACCOMPANIED BY DR. C. J. VAN SLYKE, ASSOCIATE DIRECTOR, NATIONAL INSTITUTES OF HEALTH; DR. JOSEPH E. SMADEL, ASSOCIATE DIRECTOR, NATIONAL INSTITUTES OF HEALTH; DR. LEROY E. BURNEY, SURGEON GENERAL; AND JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

PREPARED STATEMENT

Senator Hill. Now we have before us Dr. James A. Shannon, Director of the National Institutes of Health. Dr. Shannon, we would be delighted to have you proceed in your own way.

Dr. Shannon. Mr. Chairman, it is a pleasure to appear before you again. I have a fairly detailed statement; if it be your wish, I can submit it for the record.

Senator Hill. All right, we will put it all in the record at this point.

(The statement referred to follows:)

STATEMENT BY DIRECTOR, NATIONAL INSTITUTES OF HEALTH

Mr. Chairman and members of the committee, the 9 appropriation requests for the National Institutes of Health for 1959 total $241 million, the same as that for the preceding fiscal year. Minor program changes include: (1) An increase in the indirect cost factor for grants, (2) establishment within the Division of Research Grants of a graduate training program for research in the basic sciences, (3) modest increases in support of research fellowships and in training and research aspects of physical biology, and (4) lapse of a special appropriation of $500,000 under the Mental Health Study Act.

National support of medical research.—The support of research and research training, both through private sources and through public funds from State and Federal appropriations, has grown from $88 million a year in 1947 to $360 million this year. The research component of the NIH appropriations represents about $150 million, or three-fourths of the Federal Government's share, and just about 40 percent of the Nation's total effort. These facts make it imperative that the policies and procedures governing Federal support programs be characterized by primary dedication to the strength and freedom of the individual scientists and their institutions. NIH programs have had the flexibility

to meet new needs, including giving leadership in certain areas of deficiency without stifling independent inquiry, the fundamental strength of American science.

Accomplishments.—The rapid growth and development of research in the life sciences in the past 10 years has been accompanied by unprecedented accomplishments. Some examples might include the discovery of cortisone and other steroids, new vaccines, better public health measures to reduce tooth decay, new drugs for management of high blood pressure, and development and application of a new cancer detection test for women. Progress of this kind provides vivid evidence that given adequate support, research will continue to progress in the prevention, treatment, and control of disease.

Extramural activities.—The comparatively rapid growth of NIH grants and training programs has led to a point at which the simple extension of existing programs may be less desirable than program changes seeking to reduce fragmentation at the university levels. Although NIH programs are focused on research and research training, it has a responsibility to design the terms and conditions under which support of these functions is provided so that it does not impose a financial drain on the educational institutions. At present, by not paying the full indirect cost of research projects supported by grants, we force universities to divert their general funds to help finance this research.

Intramural activities.—In our own research at Bethesda, there are two needs which warrant special mention. One of these relates to the level of remuneration for scientists and scientific administrators. It is increasingly evident that if we are to continue to attract and retain outstanding scientific personnel, further attention must be given to providing career opportunities that are parallel to those in medical schools and universities. Second, although we are moving ahead with two major construction projects (Biologics Standards and a new surgical wing for the Clinical Center), the other two authorized projects (Dental Research Building and Office Building) should proceed as soon as possible within the overall fiscal policies of the Federal Government as determined by the national economy.

EFFECT OF HOUSE ACTION

The President's budget for all appropriations of the National Institutes of Health, which you have before you, provides for an increase in overhead allowances for research grant projects from 15 to 25 percent. This subject is discussed here rather than by each Institute because the policy question involved is identical among the Institutes. The appropriation bill, as passed by the House of Representatives (title II, general provisions, section 207) specifically prohibits this increase. It is our feeling that this action will have an adverse influence upon the long-range fiscal stability of medical and dental schools and universities. We, therefore, ask that the payment of increased overhead allowances be allowed.

Approximately the present level of research support in all areas can be maintained while allowing full indirect costs if the increase of $8,200,000 allowed by the House is redistributed for this purpose rather than for the purposes indicated in the committee report.

The following proposed redistribution of the House increases would accomplish this purpose:

Appropriation	House increase	Revised distribution
General research and services	0	$796,000
National Cancer Institute	$1,500,000	1,779,000
Mental health activities	2,700,000	1,000,000
National Heart Institute	1,500,000	1,632,000
Dental health activities	250,000	238,000
Arthritis and metabolic disease activities	500,000	943,000
Allergy and infectious disease activities	500,000	902,000
Neurology and blindness activities	1,250,000	910,000
Total	8,200,000	8,200,000

The House of Representatives also included $3,700,000 in the appropriation bill for construction and equipment of a dental research building as authorized by Public Law 755, 80th Congress, as amended, to remain available until June 30, 1960.

Formal Statement

Mr. Chairman and members of the committee, I am happy to have the opportunity to appear before this committee on behalf of the several Public Health Service appropriation requests which in total constitute the 1959 program proposals for the National Institutes of Health.

As in former years, this portion of the Public Health Service's presentation is in two parts. The first part relates certain factors which pertain to the Institutes as a whole, with emphasis on the part we play in the Nation's total research effort in the medical and biological sciences. The second part has to do with two specific appropriations administered by the National Institutes of Health as a whole rather than by the separate Institutes. One of these is entitled "General Research and Services, NIH." The other is the health research facilities construction program. The other appropriations, each representing an Institute, will be presented by the Institute Directors.

NIH PROGRAM SUMMARY—FISCAL YEAR 1959

First I shall sum up the appropriations requests that are before you for the National Institutes of Health. These total $241 million, the same amount as appropriated for fiscal year 1958.

Four points should be borne in mind when looking at the 1959 summary tables and comparing them with 1958:

1. As already pointed out to the committee, a larger portion of the research grants item is proposed to support the indirect costs of research to the medical schools and universities.
2. The budget for the first time reflects the establishment, by lateral transfer of funds, of a centralized graduate-training program in the sciences basic to medicine.
3. Provision has been made through a rearrangement of funds for the senior research fellowship program to go forward as planned and for modest program increases in both training and research aspects of physical biology.
4. 1958 is the last year authorized for special appropriation of $500,000 under the Mental Health Study Act, so that item is not contained within the National Institute of Mental Health's 1959 proposal.

Otherwise the program presented is essentially the same as that for 1958.

This program is now supporting some 6,700 research projects, at more than 500 research centers across the country, in the amount of $97.7 million. In addition, support for the training of thousands of scientists and medical specialists is provided in the amount of $39.4 million. This is done both directly through fellowships and traineeships ind indirectly through traning grants to research and teaching institutions. The appropriations provide $30 million for assistance in the form of matching grants for the construction and equipping of research facilities—a program which, incidentally, has seen the $60 million in Federal funds during 1957 and 1958 matched by $320 million from private sources, even though only $60 million in matching funds was legally required. These programs also provide nearly $12 million for research contracts in cancer chemotherapy, $5.5 million for professional and technical assistance, and $10.3 million for certain field investigations and control programs. Finally, nearly $39 million is provided for the research carried out as a direct operation of the Institutes at Bethesda and to a limited degree in the field.

This functional summary of the programs financed by the nine NIH appropriations must be viewed in context if it is to be meaningful.

EVOLUTION OF SUPPORT PROGRAMS

Nineteen fifty-seven saw the completion of 10 years of marked expansion in our Nation's medical research effort. At the close of World War II, the United States was spending about $88 million a year in a program that bore the marks of the war in which it, too, had served so well. Two factors—public support and research opportunity—were at the base of the changes that ensued. The dollars available for support of research and research training began to increase steadily, with part of the increase coming from private sources and part from public funds made available through State and Federal appropriations. By 1950, medical research support was at a level of $140 million. By 1954, it was $220 million. Today, it is estimated that nearly $360 million is being spent for research in medicine and biology in this country. Of this, the Federal Government provides over half, or $200 million. The research component of the NIH

appropriations represents about $150 million, or three-fourths of the Federal Government's share, and just about 40 percent of the Nation's total effort.

PROGRESS: GROWTH, ACCOMPLISHMENTS, AND SPECULATION

It is evident from the figures just cited that the past 10 years have seen rapid growth and expansion in the life sciences. They have also seen unparalleled advances in the contributions of science to life.

During these years we have seen, for example:

Cortisone and other steroids for the treatment of rheumatic disease.

Vaccines for the prevention of polio, influenza, upper respiratory infections.

Radioisotopes join surgery and other radiation sources as a means of treating cancer, and the development of a number of compounds which ameliorate certain forms of cancer.

Development and widespread use of an inexpensive public-health measure that can cut tooth decay in half.

Discovery of a wide array of chemical weapons useful in the management of high blood pressure.

A number of findings which have reduced the death rate among mothers and infants and also reduced certain of the diseases arising from complications during pregnancy and at birth.

Dramatic improvement, through techniques and instrumentation, in surgery for congenital heart malformations and hearts damaged by rheumatic fever.

Development and application of a test for early diagnosis of a form of cancer in women, permitting treatment before it is too late.

Discovery of a family of drugs permitting startling advances in the management of mental illness.

Progress of this kind provides vivid evidence, if such is needed, that the planned use of a segment of our national resources for medical and biological research is a sound investment, with dividends that are both humanitarian and economic.

I might comment here that although one may perceive progress in terms of the better ability to prevent, treat, or cure diseases, the research upon which such progress is predicated cannot be neatly categorized. It is just as well, perhaps, for research programs to be set up so that their very names (heart, cancer, mental health) serve as a constant reminder that the ultimate end of research is useful knowledge. Having served that purpose, however, it is essential that such programs then maintain a research framework within which there is optimal opportunity for representation from and interplay among the full range of scientific disciplines and medical specialties. For increasingly it becomes evident that as research probes deeper and deeper into the areas of darkness that can be illuminated only by the intellect and the curiosity and the perseverance of man, the separation of science into components such as basic versus applied, laboratory versus clinical, or even physical versus biological, becomes a virtually meaningless exercise in semantics. Science is one in its essential aspects, and of paramount importance is the provision of means for each scientist, regardless of his discipline, to contribute freely to the resolution of the problems under attack.

Those of us who administer the research programs derived from the legislative and fiscal actions of Congress count among our greater blessings your recognition of several cardinal principles: (1) The importance of continuity and stability in the support of research; (2) the need to support medical research at the fundamental as well as the applied level if sound progress is to be made against the major diseases which plague us; and (3) the awareness that science cannot guarantee results according to a fixed timetable regardless of the level of support.

Yet, without attempting to prophesy, it seems quite clear that the stream of discovery will continue to flow in the years ahead, that the continuing investment in medical research will continue to extend life and, perhaps more importantly, extend useful and happy living.

In this connection, I should like to call to your attention an analysis prepared by the Office of the Actuary of the Social Security Administration. Actuarial analyses, for me, are generally not stimulating reading; but some of the assumptions for this study, which is one of the primary bases for forecasting the long-range development of the old-age and survivors' insurance program, are startling.

By the year 2000, it assumes that the average expectancy of life after age 60 will increase from the current 17.5 years to 22 years. The death rate from heart diseases for men 50 years of age will be 50 percent of the current rate. The death rate from cancer for women 60 years of age will also be only half the current rate. Deaths from tuberculosis will be negligible. The year 2000 is actually not very remote. Let me remind you that children born this year will be only 42 years old in the year 2000.

These are actuarial projections. There is no one of us in biological science who would have the temerity to forecast medical progress with such precision. Yet there is no one of us who is not confident that such advances will be achieved in the future as in the past. It is axiomatic, although certainly not automatic, that results of far-reaching consequence will accrue when a concerted effort is made to support the most brilliant scientific intellects in a population of 175 million people.

THE NATIONAL PROGRAM

In our society, the responsibility for providing the support for sustained national medical research effort is a shared responsibility. The fact that the Federal share is roughly 50 percent of the total support makes it all the more imperative that the policies and procedures governing Federal support programs be characterized by a primary dedication to the strength and freedom of the individual scientist and his institution. We have tried to help NIH grow in such a pattern.

We have found, for example, that our programs must remain flexible if they are to meet the changing and emerging needs of the scientific community. We have found that it is possible for us to give leadership through stimulation of research in certain areas of deficiency without doing damage to the kind of independent inquiry which is the fundamental strength of American science. We have found, as we look back over the last 10 years, that our training programs have been in fact a fertile spawning ground for research workers, teachers, and specialists of various kinds. We have seen in practice the values to be derived from simultaneous support of research projects, training, and research facilities—values which take shape in a national research effort that is balanced instead of disproportionate. And we have seen confirmed time and again the wisdom of a grant and award review process through which decisions on the individual and the project to be supported are made by a cross section of American science serving as advisers to the Public Health Service.

I feel, as I reflect on the last decade of development within these programs, that they can be a source for pride on the part of all those who brought them into being and watched over their needs during a period of rapid growth. The Congress has played a genuinely objective, bipartisan, farsighted role in this process. The distinguished chairman and the members of this committee, and your colleagues past and present, did not require the overt challenge of an earth satellite launched from the other side of the world before giving the kind of impetus needed for a national program of research in medicine and biology commensurate with the needs and aspirations of our people for better health.

PROGRAM DEVELOPMENTS

In a presentation of this kind, which must be directed in part to a review of this year's activities in order to provide a background for our 1959 budget proposals—I can but sketch in a few high points. The Institute Directors will present the details of their respective programs. And we shall be happy to provide such supplemental information as the committee may wish.

Research accomplishments can of course be viewed as our primary goal. The past year has been productive in this respect. I shall not attempt to enumerate or illuminate the findings which have emerged through our programs and taken their place in the fabric of today's knowledge of health and disease. I should like to bring to your attention, however, the series of documents called Research Highlights of 1957, prepared to supplement the testimony of our witnesses. I am sure you will find these summary statements both interesting and informative.

There have been, in addition, a number of program developments which warrant special attention.

Research contract and patent problems are being solved, permitting effective participation by industry in the cancer chemotherapy program.

Other collaborative programs, notably the study of tranquilizing drugs and the study of perinatal influences on such diseases as cerebral palsy and mental retardation, have become solidly established.

The first of a number of broad, university-centered research programs focused on the multiple health problems of our elder citizens has been established at Duke University, and at least two other such projects are in negotiation.

Scientific interest and attention have been brought to bear on the hitherto relatively neglected research problems of gastroenterology.

Essential first steps have been taken to give new impetus to research and training in the field of physical biology, including study of the biological effects of ionizing radiation.

Results are being achieved in a broad public-health program seeking reduction in rheumatic heart disease by control of streptococcal infections related to rheumatic fever.

Negotiations have been completed leading to establishment in Panama of a small field laboratory for study of tropical diseases, particularly arthropod-borne viral diseases, representing important pan-American public health, military, and economic problems.

Our research and vaccine development programs to combat the Asian influenza epidemic was conducted with signal effectiveness and dispatch.

The development program focused on how to bring cancer of the uterine cervix under control by widespread use of an exfoliative cytology test for early diagnosis arrived at a point where a portion of the program emphasis could be shifted to the Bureau of State Services so as to encourage wide application of knowledge already at hand.

Progress was evident, both in recruitment and in conversion of facilities, on the project under which our scientists will collaborate with St. Elizabeths in the study of therapy of mental illness.

A central program supporting graduate training in the basic sciences was established in the Division of Research Grants.

The research fellowships program was broadened to permit a limited number of outstanding young scientists from other countries to compete for support while studying in American research centers.

The program for translation and dissemination of the Russian literature in medicine and biology progressed satisfactorily in its second year amid growing indications of its interest and value for scientists in this country.

For each Institute there was established a board of distinguished scientific advisors to review and make recommendations concerning its direct research operations at Bethesda.

Initial steps were taken toward the strengthening of the program analysis and evaluation functions for NIH as a whole, with primary initial emphasis on the collection and processing of data bearing on research grant and training activities.

These are just some of the program developments. They may serve to indicate the application of what I believe to be a critically important aspect of research program administration—the willingness to move, to change, to experiment, to maintain a dynamic quality that is in character with our society itself.

A LOOK AHEAD—EXTRAMURAL

As indicated earlier, the combined appropriation requests for the National Institutes of Health provide essentially for continuation in 1959 of program levels established in 1958.

Thus, instead of following the customary procedure of summarizing the programs described in the budget justifications that are before the committee, I feel it may be more useful to view the decade ahead (as I have just reviewed the decade past) and discuss with you certain problems and needs that we face.

First, in connection with our support programs, I am concerned that we as a Nation do everything we can progressively to strengthen our educational processes. As Director of the National Institutes of Health, my greatest interest is in research manpower for medicine and biology. By statute and by tradition, our training programs are focused primarily if not exclusively at the postgraduate and graduate levels. But I am of course keenly aware of how dependent we are, in this specialized scientific training, upon the total educational structure. Strong academic training, including science, at all levels has direct and important bearing on the adequacy of scientific manpower in the years

ahead. As science can become introduced more broadly into elementary school curriculums, as the stature of science teachers and the caliber of science teaching improves at high school and college levels, as career opportunities improve, as America fosters and develops respect for intellectual pursuits, so will there be marked change in both the number and the quality of young people seeking to make research in the life sciences their life's work.

Although we have come a long way since 1946 toward assuring the research grantee and his institution that the Congress and the Service intend that our programs should have stability and continuity, there remains much to be done in this direction.

Our programs have come into being during the past decade in ways that are characteristic of rapid growth. The program elements, whether research or training, have been responses to immediate needs within the broad context of our statutory authorities. Thus we have seen many different kinds of training programs, for example, and even different kinds of research grants programs. All this has been necessary and good during a period of time in which all of us concerned with the evolution of a strong national research program in medicine and biology have been feeling our way.

We have now reached a point, however, at which the simple extension of existing programs and the addition of still further program fragments is probably not the wisest way to expend public funds and may be even damaging to the institutions in which so much of our intellectual strength is focused. I feel we must now seek a means for returning to the institutions greater control over their own destinies.

As one observes the effect of all NIH extramural programs upon the institutions conducting research—primarily the various schools within universities—the relevance and importance of the truism that research and eduction are inseparably related becomes clear. For the future, it is quite clear that the research grant and training programs of NIH must be modified to make them in total a more effective means of supporting the combined teaching and research functions of universities. It is equally clear that means must be devised for consideration of the goals and needs of individual institutions as totalities. The devices through which these objectives will be attained are under study. They include such matters as long term, stable, broad program, and departmental support.

In the years ahead, therefore, we must program our support activities so that fragmentation at the university level is progressively reduced. If this should not happen, and fragmentation should increase with the progressive expansion of the base of our support, the results could well be catastrophic.

Another need that I perceive in the years ahead is the need to find ways to achieve and maintain balance among those programs under grant support which are "planned" research progarms, as contrasted with research undertaken at the initiative of individual investigators. The ability to plan and to execute vigorously large-scale investigative efforts, requiring voluntary adherence by large numbers of investigators to centrally planned research designs, is one of the major contributions of the postwar Federal medical research effort. On the other hand, however, I believe such collaborative research cannot be permitted to take the place of or otherwise obscure the essentiality of the individual and his need for an unrestrained opportunity.

Moreover, I feel such collaborative program efforts, while often the only way to secure needed information quickly, can easily become wasteful of resources, particularly if their premises remain essentially untested during periods of rapid growth. We now have four major programs that fall into this category. And while I would be the last to attempt to define the ultimate dimension to which they should aspire in years to come, I do feel that for a period of 12 to 18 months these 4 programs—cancer chemotherapy, drugs against hypertension, studies of the perinatal period, and the psychopharmacology of mental illness—should preferably remain at their present levels for a time in order to affirm their procedures and solidify their relationships before going ahead.

Still another requirement for the future is the extension of our ability to approach medical research within the context of science as a whole, with emphasis on fundamental studies and on the training of people highly qualified for investigations of the broad spectrum of biological, biochemical, and biophysical phenomena underlying all biological systems in normal and abnormal states.

Finally, and most important of all in terms of the long look ahead, the growth and maturation of the support programs administered by the National Insti-

tutes of Health make it mandatory that we consider carefully the role of medical schools and universities as incubators for medical and biological research. Starting with extensive support of current research through grants, we then added a heavy element of manpower training when it became apparent that the production of additional competent scientists was clearly a matter of high priority. Then there followed a research facilities construction program, completing the research-manpower-facilities triad.

This threefold program presupposes a healthy, vigorous university world capable of bearing this added workload. The total research effort, which is a big one, can be fully effective only if the universities—including medical schools—are able to serve both as a home for scientific scholarship of the highest order and as centers for education of the highest caliber. Such a sound base, unfortunately, does not exist with any degree of uniformity at this time.

I agree with those who say that the attainment of a stronger total university structure is a matter of pressing national urgency. I should like, if I may, to quote briefly on this subject from a report of a discussion of the trustees of the Carnegie Endowment for the Advancement of Teaching. The report said:

"Since the Federal Government is very much involved in American higher education today, it is faced with innumerable opportunities either to strengthen or to weaken the fiscal position of the colleges and universities, and with innumerable opportunities to strengthen or weaken the teaching profession. In everything it does, the Federal Government should exhibit a keen recognition of the importance of the teaching profession and it should seek at every point to design its own programs in such a way as to achieve the strengthening which that profession so badly needs."

It is not our function, as one of the research grant and training programs of Government, to solve all the financial problems of medical schools and universities. On the other hand, we are responsible for designing the terms and conditions under which we provide aid to research and manpower training so that we do not impose a financial drain on the educational institutions.

At the moment, as the committee is aware, we do not pay the full cost of the research which we support by grants to medical schools and universities. The schools divert their general funds to help finance research carried out with Public Health Service funds, specifically by bearing a portion of the indirect costs or overhead on each project. The research must go on, and the schools, with a tradition of service to the Nation, cannot and should not curtail the research. But to sustain research even at current levels, they must weaken themselves. In diverting general funds to support research, they reduce their ability to provide attractive and stable career opportunities for teachers. They weaken their total capacity to teach. And among those they teach are the investigators of the future.

This line of reasoning, based essentially upon the impact of our present practices on both the teaching function and the fiscal strength of medical schools and universities, leads me to the conviction that the Public Health Service should pay the full indirect costs of the research it supports.

A LOOK AHEAD—INTRAMURAL

When I look ahead to the next decade in terms of our own direct research in laboratories at Bethesda, I find two subjects which should be brought to the special attention of the committee.

The first of these has to do with our key scientific personnel. In the world of science, the professional staff at NIH has a solidly established reputation. During a period of rapid growth, we have attracted to Bethesda a number of brilliant young scientists and a few distinguished elder statesmen to complement the effective scientific corps which derived from the Service's earlier research activities. We are proud of our staff.

Interchange of young scientists at middle grades with medical schools and universities is a desirable practice in the aggregate and more to be stimulated than avoided. In recent months, however, there have been a few more departures from our group than might normally be expected. A few of our more senior people have gone back to universities or to industry simply because they were made a more attractive offer financially. We, as the committee knows, use both the commissioned corps and the civil-service personnel systems. In practice, the two systems have proved compatible. The availability first of supergrades GS 16–18) and more recently of 208 (g) positions which can pay up to

$19,000 has helped immeasurably by freeing up the top and thus extending the career opportunity for the total group. For the years ahead, further attention should be given to pay scales, to increasing the number of top positions available, to strengthening the comparability factors between the commissioned corps and civil service, and by including biologists, behaviorial scientists, and other categories excluded from certain pay benefits in recent Civil Service Commission proposals. Certainly a great deal is already being done to make Federal employment more attractive for a scientist. My concern is that our salaries be competitive with the best universities, since we at Bethesda can ill afford to have it otherwise.

The second point about our intramural program, and again looking ahead, relates to completion of the authorized new construction projects at Bethesda. As the committee knows, there are four such projects. Two of these—new surgical facilities at the Clinical Center, and a new laboratory for the regulatory and research functions of the Division of Biologics Standards—have funds appropriated. The biologics building is now out for bid preparatory to construction, and while the surgical wing is still in the stage of tentative plans, some progress is being made.

Of the other 2 proposed projects which are integral parts of the long-range construction program, 1 is the much-discussed laboratory for research activities of the Dental Research Institute, and the other is an office building. It is our earnest hope that these structures can be built as soon as the national economy permits.

I will not dwell extensively upon the substance of research in our intramural program, but I cannot leave the discussion of this activity without a word or two. The past 10 years has seen striking growth both in size and complexity of the program of the NIH. The next decade will be primarily one of consolidation. There will be areas requiring special consideration, however, and we believe modest expansion may be required to provide for special needs and opportunities which cannot be made available through reprograming of resources and reorientation of scientific personnel. Physical biology and germ-free research are two such opportunities which we will wish to discuss at length with the committee in years to come.

SCOPE OF PROGRAM

Dr. SHANNON. There are some 9 items contained within the statement which covers the National Institutes of Health in general as well as the 2 operational programs budgeted in the general appropriation; the Division of Research Grants and the Division of Biologics Standards. The nine appropriation requests for the National Institutes of Health for 1959 total $241 million, the same as that for the preceding fiscal year.

Minor program changes include: (1) An increase in the indirect cost factor for grants, (2) establishment within the Division of Research Grants of a graduate training program for research in the basic sciences related to medicine, (3) modest increases in support of research fellowships and in the training and research aspects of physical biology, and (4) lapse of a special appropriation of $500,000 under the Mental Health Study Act.

NATIONAL SUPPORT OF MEDICAL RESEARCH

The support of research and research training, both through private sources and through public funds from State and Federal appropriations, has grown from $88 million a year in 1947 to $360 million this year. The research component of the NIH appropriations represents about $150 million, or three-fourths of the Federal Government's share, and just about 40 percent of the Nation's total effort.

These facts make it imperative that the policies and procedures governing Federal support programs be characterized by primary

dedication to the strength and freedom of the individual scientists and their institutions. NIH programs have had flexibility to meet new needs, including giving leadership in certain areas of deficiency without stifling independent inquiry, the fundamental strength of American science. Further modification of administrative practices are envisaged.

ACCOMPLISHMENTS

The rapid growth and development of research in the life sciences in the past 10 years has been accompanied by unprecedented accomplishments. Some examples might include the discovery of cortisone and other steroids, new vaccines, better public health measures to reduce tooth decay, new drugs for management of high-blood pressure, and development and application of a new cancer detection test for women.

Progress of this kind provides vivid evidence that given adequate support, research will continue to progress in the prevention, treatment. and control of disease.

EXTRAMURAL ACTIVITIES

The compartively rapid growth of NIH grants and training programs has led to a point at which the simple extension of existing programs may be less desirable than program changes seeking to reduce fragmentation at the university levels.

Although NIH programs are focused on research and research training, it has a responsibility to design the terms and conditions under which support of these functions is provided so that it does not impose a financial drain on the educational institutions. At present, by not paying the full indirect cost of research projects supported by grants, we force universities to divert their general funds to help finance this research.

Such a practice has consequences which, in the long run, can only be harmful to the institutions upon which scientific advancement is largely dependent.

INTRAMURAL ACTIVITIES

In our own research at Bethesda, there are two needs which warrant special mention. One of these relates to the level of remuneration for scientists and scientific administrators. It is increasingly evident that if we are to continue to attract and retain outstanding scientific personnel, further attention must be given to providing career opportunities that are parallel to those in medical schools and universities.

Second, although we are moving ahead with two major construction projects (biologics standards and the new surgical wing for the clinical center), the other two authorized projects (the Dental Research Building and the office building) should proceed as soon as possible within the overall fiscal policies of the Federal Government as determined by the national economy.

The first of these problems will in part be resolved if the amendment to the Senate Classification Pay Act of 1959 is agreed to by the House in conference. This amendment, proposed by Senator Hill and Senator Neuberger, and passed without dissent by the Senate, as

you know, proposes that an additional 25 Sec. 208 (g) positions be made available to the National Institutes of Health.

I can't emphasize the importance of these positions too much.

The second of these problems, that is, that which relates to construction, appears to be close to the first step of resolution. It seems likely that we have agreement with the Bureau of the Budget on the tentative plans for the Dental Building so that this can go forward to definite planning and it may be that a comparable resolution relative to the office building will shortly be possible.

Since submitting this budget we have had a most gracious reception by the House Appropriations Committee and through their recommendations by the membership as a whole. Actually, their generosity in the handling of our budget requests makes it more than a little difficult for me to proceed to the next point that I feel I must, in all honesty, discuss.

OVERHEAD ALLOWANCES FOR RESEARCH GRANTS

The President's Budget for all appropriations of the National Institutes of Health, that I have just outlined, provides for an increase in overhead allowances for research grant projects from 15 to 25 percent, as an average. I feel I must discuss this subject at this time rather than in relation to the individual institute appropriations because the policy question involved is identical among the Institutes and general in its implication.

The appropriation bill as passed by the House of Representatives (title II, general provisions, sec. 207) specifically prohibits this increase. It is our feeling that this action will have an adverse influence upon the long-range fiscal stability of medical and dental schools and universities.

We therefore, ask that the payment of increased overhead allowances be allowed.

Approximately the present level of research support in all areas can be maintained while allowing essentially full indirect costs if the increase of $8,200,000 allowed by the House is redistributed for this purpose rather than for the purpose indicated in the House committee report.

I have a table here that gives a proposed distribution of the House increases which would accomplish this purpose if you would like it to go into the record?

Senator HILL. We would be glad to have that table for the record and it will give us a detailed breakdown.

(The table referred to follows:)

The following proposed redistribution of the House increases would accomplish this purpose.

Appropriation	House increase	Revised distribution
General research and services		$796,000
National Cancer Institute	$1,500,000	1,779,000
Mental health activities	2,700,000	1,000,000
National Heart Institute	1,500,000	1,632,000
Dental health activities	250,000	238,000
Arthritis and metabolic disease activities	500,000	943,000
Allergy and infectious disease activities	500,000	902,000
Neurology and blindness activities	1,250,000	910,000
Total	8,200,000	8,200,000

DENTAL RESEARCH BUILDING

Dr. SHANNON. The House of Representatives also included $3,700,000 in the appropriation bill for construction and equipment of a Dental Research Building as authorized by Public Law 755, 80th Congress, as amended, to remain available until June 30, 1960.

For this action we are most thankful.

PROGRESS ON PROGRAMS

The progress which will be reported to you by each of the institutes provides, I believe, striking evidence that the planned use of a segment of our national resources for biological and medical research is a sound investment, with dividends that are both humanitarian and economic.

I might comment here that although one may perceive progress in terms of the better ability to prevent, treat, or cure disease, the research upon which such progress is predicated cannot be neatly categorized. It is just as well, perhaps, for research programs to be set up so that their very names (heart, cancer, mental health) serve as a constant reminder that the ultimate end of research is useful knowledge.

Having served that purpose, however, it is essential that such programs then maintain a research framework within which there is optimal opportunity for representation from and interplay among the full range of scientific disciplines and medical specialties.

For increasingly it becomes evident that as research probes deeper and deeper into the areas of darkness that can be illuminated only by the intellect and the curiosity and the perservance of man, the separation of science into components such as basic versus applied, laboratory vesus clinical, or even physical versus biological, becomes a virtually meaningless exercise in semantics.

Science is one in its essential aspects, and of paramount importance is the provision of means for each scientist, regardless of his dicipline, to contribute freely to the resolution of the problems under attack.

CARDINAL PRINCIPLES OF RESEARCH

Those of us who administer the research programs derived from the legislative and fiscal actions of Congress, count among our greater blessings your recognition of several cardinal principles: (1) The importance of continuity and stability in the support of research; (2) the need to support medical research at the fundamental as well as the applied level if sound progress is to be made against the major diseases which plague us; and (3) the awareness that science cannot guarantee results according to a fixed timetable regardless of the level of support.

Yet, without attempting to prophesy, it seems quite clear that the stream of discovery will continue to flow in the years ahead * * * that the continuing investment in medical research will continue to extend life and, perhaps more importantly, extend useful and happy living.

I would not have the committee feel that such optimism as has characterized my remarks up to now is an indication that all our problems are resolved, or will be resolved within the next budget year.

NEW SUGGESTIONS ON SUPPORT PROGRAMS

I believe that each year for the next few we will come before you with new suggestions on the mechanisms of our support programs in research and in training—

on the needs to balance these with adequate support for research facilities.

on the needs, which become obvious, to modify our program so as to establish and maintain stable careers in research. Our programs do not do this at present.

on program modifications which are aimed at the strenthening of the institutions of higher education that develop our scientists and within which a large share of the Nation's research plant is contained; full indirect cost payments is the first step in this direction.

on program modifications which bring into full partnership with the Federal Government these same institutions in a manner which permits the real development of institutional objectives and thereby creates more institutional responsibility for the research conducted by institutional scientists.

Some of these problems are discussed in detail in my submitted statement. They are all contained specifically, or by implication, in my discussions of last year which stemmed from an exchange of correspondence initiated by Senator Hill and relating to problems of support of medical research.

GENERAL RESEARCH AND SERVICES, NIH

If it is the chairman's pleasure, I can turn now to the appropriation item "General research and services, NIH," and certain operations which are carried out at Bethesda under reimbursements from the several Institutes, or I can stand on the submitted statements, which are quite complete. If the chairman wishes the latter, then I would wish to comment only briefly on two aspects of the appropriation.

On the other hand, you may wish to explore some of the generalities that I have been discussing and turn to the specifics of the two programs subsequently.

Senator HILL. Before you go into these other matters, I want to say I was impressed with all you had to say, as well as with all that Secretary Richardson had to say about this matter before.

Now, before we hear the allowances: As you know, we had considerable testimony about this matter at the last session and, as I recall, the session before that.

What are the problems of institutional instability and how, you might say, are they derived and how do the NIH programs affect this aspect of our medical schools?

Dr. SHANNON. Senator Hill, if one goes back to the beginning of broad and general institutional support of research in the 1930's, one finds that the bulk of research was supported by institutional funds of a highly stable nature derived largely from endowments or other constant income available to the institutions.

Over the past 20 years, the last 10 of which has involved these programs, 2 things have happened. First, there has been a drastic reduction of substantial private giving. This, in large part, is a con-

sequence of the modification in the income-tax setup so that large fortunes do not accrue now to the extent they did in the first quarter of the century. In addition, there has been a striking increase in the dollar cost of doing research, in part, because of the changing nature of the research and, in part, because of the depreciated value of the dollar.

Now, beginning in 1946, the programs of the NIH provided significant help to individual scientists within the universities through grants-in-aid, their primary support being from the institution. But progressing from 1946 a situation has developed wherein the institutional income has decreased relatively, depreciation of the dollar has continued, and yet, despite this, there has been a tremendous broadening of the medical research base of the country. The broadening of the medical research base, which is largely a result of NIH programs, has not been accompanied by a comparable expansion of the stable base upon which these research programs are superimposed.

I feel that, in some way or another, a means must be provided, either from within our programs by a change in the nature or terms of our grants, or from outside of our programs, which will broaden and stabilize the base upon which research and training is incorporated in our institutions of higher learning. In other words, we must stabilize and strengthen the financial position of our institutes of higher learning. This, I think, is a must problem which has to be solved.

The same situation obtains in areas of higher learning and education other than medicine, but we must particularly press for a solution in medicine because here there has been such a rapid and striking increase in the scope and breadth of support of research without, at the same time, a comparable increase in the stable base of the institutions concerned.

1958 HOUSE LIMITATION ON RESEARCH FUNDS

Senator HILL. You may recall, Doctor, that when the appropriation bill came to this committee at the last session it had a provision which had been put in by the House of Representatives that none of the funds which you would invest yourself should be used to pay a recipient of a grant for the conduct of a research project if the amount of indirect expenses projected into such project was in excess of 15 percent of the direct costs.

You will recall that the Senate committee and the Senate itself struck that provision from the bill. Then we went into conference and the House conferees were very adamant in their position in that a study was being made of this matter.

Now do you know whether or not that study had been concluded?

Mr. KELLY. I believe not, Mr. Chairman. The House Appropriations Committee did direct their investigations and survey staff to look into it and we find they are still inquiring into it.

STUDY ON COST MEASUREMENT

Another study underway which was referred to at that time was this interagency committee which was set up in an endeavor to develop a uniform document for all Government agencies to measure that cost and such a document has now been completed in draft form, as

I found out last night, and was sent out to each of the Federal agencies and departments that have such research to obtain their comments before it is put into effect on a national basis.

Senator HILL. Well I suppose there is no way to know when this draft will finally become effective, is there?

Mr. KELLY. I think that the governmentwide policy document will be ready for issuance by the 1st of July.

Now what the status of the House investigative staff analysis of this is, I do not know.

Senator HILL. You do not know the status of the House investigations?

Mr. KELLY. No, sir.

Senator HILL. This committee, of course, by its very action has shown it is in sympathy with the same statements as expressed by Dr. Shannon and Secretary Richardson, but after all, whatever we do, we find that we have to go back to the House for agreement, as you know.

Did you present this matter pretty fully to the House committee, Doctor. Did you have an opportunity to present it over there?

METHOD OF CONDUCTING STUDY

Dr. SHANNON. Senator Hill, we did not. Let me put it another way. We have really been in a rather difficult position to develop wholly independent information upon which to make a very strong presentation. This is because of the historical development of the study program related to the payment of indirect costs.

Initially, this was assigned, as a problem for resolution, to the National Science Foundation. They were requested to develop a pattern for the handling of indirect costs that could be applied Governmentwide. The National Science Foundation made recommendations, I believe, approximately 2 years ago. This was not found acceptable to some of the branches of the executive department and a second study was initiated by the Bureau of the Budget in conjunction with the General Accounting Office and certain of the controllers of the services. This ad hoc committee also had representation from the various executive branches which conducted research support programs.

They were to inquire into two problems; primarily, how one computes the indirect costs and, secondarily, what are the needs of the institutions involved.

Our position has been, and when I say "our," I mean the position of the Department; our position has been that during this investigation, being conducted by a higher authority, we were not free to undertake our own independent inquiry. Consequently, our information, and we have a sizeable amount of it, has been obtained by keen observation of what is happening in the medical schools, by independent but informal interviews with some of the deans, some of the university presidents, and some of the professors in the schools. I have no doubt whatsoever that our conclusions are sound and are valid, but the basis of them has not been collected in a sufficiently systematic way that it can be presented as a completed study.

We have been hoping, since last fall, that the present study would be completed by the present committee in time for those hearings.

Their investigations, I believe, are completed, but the report is not yet available.

QUESTION OF INDIRECT COST

Meanwhile there has been serious consideration of the problem by a group of consultants Secretary Folsom called together under the chairmanship of Dr. Bayne-Jones to advise him on a number of broad problems relating to the support of medical research. After discussing this problem over a period of several meetings, at the January meeting they recommended to Mr. Folsom without reservation, that he should do everything he possibly could to obtain full indirect cost.

I might add a word on the composition of this advisory group. It consists of 4 deans or their equivalent in terms of vice presidents in charge of medical affairs; 3 very top echelon business leaders with primary research and development responsibility; and 1 outstanding clinical investigator attached to 1 of the large private foundations which conducts a broad research program.

Again, this group of eminent scientists, educators, and administrators from the universities, from business, and from the private research foundation type of organization, wholly supports the attitude we have developed relative to the need for the full payment of indirect costs.

Senator HILL. Well, I think the action of this committee in the area last year is pretty indicative of the feelings of this committee of the Senate at this time; but what we will have to do, as you realize, when we go to conference with the House conferees, we have to be armed with the best possible information in this matter so as to present the best possible substantiation of the case.

This record, as we know, will not be in final form for several weeks yet anyway, so I hope you gentlemen will continue to think about this matter and if you get any more definite information or anything specific that will throw light on this subject, I would appreciate it if you would let us have it.

Dr. SHANNON. Senator Hill, we can pull together the information we have in a form that I believe will be presentable. Perhaps we can also obtain certain of the information previously collected by the National Science Foundation and the Bureau of the Budget and submit, for inclusion in the record, a statement supporting our position.

Senator HILL. If you do that, we will certainly appreciate it. That is fine.

All right, thank you, Dr. Shannon, and please furnish that additional information and, Mr. Kelly, if you have any additional information, will you let us have it?

Mr. KELLY. Yes.

PROBLEMS OF INDIVIDUAL IN RESEARCH

Senator HILL. Now, Doctor, what are the problems of the individual who elects a career in research and amplify that some by indicating what is the significance of these problems to the development of a sound, national support program for research?

Dr. SHANNON. I will first speak to the problem of the individual, Senator Hill. First, in electing a career of research he must make a personal decision to gamble a lifetime of hard work or his lifetime

and that of his family, against the opportunities in a field where the return in terms of accomplishment is uncertain at best. Regardless of the brilliance of the individual, his research accomplishments cannot be predicted with certainty.

Second, he looks forward to this career, in terms of remuneration, for himself, and again I would emphasize his family, with a clear realization that it can never bring rich financial returns. To this extent he must make an initial financial sacrifice.

Now what future can he look forward to?

Our research programs have expanded greatly since 1946, nonetheless, there has been an actual contraction of number of stable positions in our institutions of higher learning which would provide career opportunities with a livable salary for the individual. As we have expanded medical research programs, we have not, again, in a comparable fashion, expanded the number of career opportunities that carry stability on the one hand, and adequate compensation on the other. This again is one of the factors which contributes to the institutional instability that you inquired about a moment ago. Probably this is the most important factor holding back the development of a sound national program of research.

At the present time, in part because of low salaries, or I should say largely because of a combination of low salaries and lack of career opportunity, there are, in our medical schools today, some 400 positions at the assistant, associate, and full professor levels that are unfilled.

Senator HILL. Four hundred, you say?

Dr. SHANNON. Yes, sir.

Senator HILL. In medical schools?

Dr. SHANNON. Yes, sir.

Senator HILL. About 82 medical schools, is that right?

Dr. SHANNON. Yes, sir.

At the same thime, through our programs of training and research support, we have developed over a 10-year period a large number of very competent and very superior research individuals who have been receiving progressively increased support since the initiation of our programs. But, except for the establishment of, I believe it is, 2 new medical schools and the conversion of two 2-year medical schools to 4-year medical schools, this tremendous expansion in medical research support—from $88 million to around about $360 million—has not been accompanied by the establishment of many stable and adequate career positions, except the new positions in the new medical schools.

So that we have developed and now have at hand an unstable mass of our more brilliant individuals who have no certainty of where they are to go. Under our present systems of support we cannot assure them of a long-range career, nor in their present financial plight can this be done by the medical schools.

I would emphasize that these individuals have already made the decision that they are willing to accept the vagaries of a career in research; they are not in research for financial gain. Nonetheless they, and their families, must be assured a livelihood with some promise of a future. If this situation continues long into the future, remembering now that our programs are still quite young, many of these

individuals will be forced to leave research because of the lack of security that is inherent in our present support program. You can well understand the extent of the loss to science.

DIFFERENT SUPPORT PATTERN NEEDED

This means we must evolve a different pattern for support of certain segments of science. We have the opportunity to do this through our training grants or I should say through a modification of our training grants, or through a modification of our research grants. By whatever mechanism finally developed it would appear mandatory to expand the career opportunities of science if we are to retain our better scientists in the field of science.

Now, I think this can be done, again referring to the Bayne-Jones advisory group. I am sure this must be one of the more serious concerns; namely, how can the NIH programs be modified so as not to give certainty of support to any individual who chooses to enter research as a career that he will have an amply funded career in research, but rather to give that opportunity to the more excellent scientists who emerge as worthy of careers in science.

I believe, Senator Hill, that the solution of this problem is the most critical objective we must reach if we are to have a sound national program of research. Furthermore, time is not on our side; it must be accomplished within the next 5 years at the very least.

Senator HILL. You are thinking now about the future?

Dr. SHANNON. Yes, sir. I think our programs are sufficiently young at this stage that this deficiency has not been too harmful as yet. But from here on, with the broad base of medical research that is now established, the absence of career opportunities, were this to continue, would, I believe, preclude the establishment of long-range stability of research of excellence in this country. I feel that strongly about it.

EVENTUAL SHORTAGE OF PERSONNEL

Senator HILL. And you would, unless we act now, foresee a shortage of personnel, would you not?

Dr. SHANNON. Yes, sir.

When I say "now," I do not mean today. I am looking to a progressive modification of research support which will achieve our objectives in the next 2 or 3 years or, at most, the next 5 years.

Senator HILL. I think we will have to agree that in order to do anything in the Government in the next 2 or 3 years you have to start now, do you not?

Dr. SHANNON. I agree.

Senator HILL. I know that is true if you are planning a building.

Dr. SHANNON. I might add, Senator Hill, that we have made starts in these general directions. I do not wish to have you think that we have been quite complacent with our progress to date and have suddenly realized our programs are deficient.

SENIOR RESEARCH FELLOWSHIP PROGRAM

An example of such a move is to be found in the senior research fellowship program that we discussed with you 3 years ago at the time it was allowed as a new program by the Congress. This program

initially provided research fellowships with salaries up to $10,000 a year. Nominations to this program come from the institution and some provision for the future of that individual in the institution concerned is assured. In order to be absolutely certain that such individuals have a real career opportunity, the terms of these fellowships contain a provision for training support covering an initial five years and permit renewal at the end of the initial 5-year period.

Actually, as Dr. Van Slyke points out, now we have the ability to pay these individuals up to $18,000 a year without in any way infringing on any civil service standards or regulations. These fellowships are, in a true sense, grants to universities rather than payments to individuals under the civil service system.

Such a fellowship program was deemed to be an effective device to accomplish an objective that was absolutely essential; that is, to obtain adequately trained scientists for the preclinical sciences, for both research and education.

The preclinical sciences I have in mind are physiology, anatomy, biochemistry, and the like. If medical research is to progress satisfactorily we must attract some of the brighter individuals to those areas of research.

These are the areas of direst need in medical science today, and this was the basis for the establishment of the program. This program will turn out, beginning 2 years from now, approximately 40 scientists per year who can aspire to full professional rank. We are committed to the schools to give very high priority to the sustaining of these individuals that cost so much to train. Using other ways we have done much the same thing.

I would emphasize that the critical need to provide careers in research has been perceived by individuals other than those in our own NIH administrative framework. The Neurological Disease and Blindness Council, at their last meeting, formally requested Dr. Bailey to develop information as to how they, as a council, could establish career opportunities for superior scientists that might involve moral commitments of funds for as long as 25 years of support. They wished more for the establishment of professorships in those areas where they had been unable to acquire superior scientists in adequate numbers.

For example they had in mind departments of neurology. We have 82 medical schools and I believe we only have some 40 full-time departments of neurology. You can appreciate the importance of resolving this deficiency in some way or another. This deficiency exists not only for research in these areas, but also for education in many of the specialities related to neurology. We have many service programs in this country to aid the blind, to aid the deaf, or people with impairments in hearing. On the other hand, the departments of the medical schools who handle these medical specialities, which impinge upon the responsibilities of the National Institute, of neurological Diseases and Blindness, in essence, have very few full-time professors much less full-time departments.

In such a situation how can we expect mature medical students and mature residents to be attracted to our specialty resident training programs when we pay so little attention to the environment in which these people must develop? How can we have sound, solid research

programs in these areas when they are so deficient in competent scientists; programs that eventually will prevent, modify, or cure the many diseases we are concerned with. These objectives are not reachable in the complete absence of full-time career opportunities in these areas.

Senator Hill, these are some of the reasons why I say we must solve the problem of career opportunities in the medical sciences and why I believe this to be the most critical problem in medical research today.

BASIC RESEARCH

Senator HILL. Doctor, speaking of research, I am continually faced with the proposition that we are not doing enough about basic research. I would like to have your comments on that.

Dr. SHANNON. I would like to address myself to this matter quite seriously. In the first place, I do not feel that much of the information that has been available to the newspapers since the launching of Sputnik I constitutes a factual description of the situation as it exists today. Many of the figures that have received particular attention are derived from a very excellent report on the basic research in the United States developed by the National Science Foundation. Importantly, however, the period of inquiry covered the years 1953 and 1954.

This was the only concise information on support of basic research available at that time.

Since 1953–54, there has been a striking expansion in basic research, at least in the life sciences, primarily because of the striking expansion of the programs operated under the auspices of the National Institutes of Health.

Now this budget aggregates, in support of research, approximately $140 million. These sums are exclusive of operational costs attributable to conduct of the program. We estimate that of our own direct operations fully 50, and possibly 60 percent, is basic. In the General Grant program, we calculate no less than 40 percent.

We feel also that in the physical sciences a good deal of the defense oriented research is basic in nature, regardless of the specific category under which it is listed. I believe, all things considered, we have quite a broad base, certainly in the life sciences. This is on the positive side.

I would like now to turn to the negative side and the hazards therein. The main problem I see is one of the future. I believe we have to maintain, on a national level, a type of review system that will provide a resolution between two quite natural forces which will always arise within our population. The first is the need to resolve problems of disease, and perhaps resolve these problems because of their urgency by crash programs. On the other hand there must be a scientific force which emphasizes the need to maintain a very broad base of basic research. It is only when the latter need is satisfied that it is possible to bring problems to the point of resolution upon which a later crash program can be developed.

Our programs represent an attempt to strike such a balance. I could point with pride to our program in cancer, that is, cancer chemotherapy. This program, which in the aggregate amounts to about $25 million a year as of the present, was carefully considered at the time of its

initiation. It has developed rather rapidly over a period of 3 years, but I do believe it is an extraordinarily sound program. Those of us who supported the program have the conviction that in no other way is it possible to explore the likelihood or possibility that chemical agents can in fact cure cancer, except through large scale mass screening of potential agents, large scale development of compounds even of minor promise, and large scale clinical testing.

I would point out, though, that this is a strikingly expensive program and contains two hazards. I really mean any program of this general sort has two hazards. It is inevitable that they will absorb a sizable amount of funds and of scientific activity, personnel, and facilities.

If we attempt, then, to place too many of these large-scale programs on the road at the same time, we will tend to divert, or actually will divert, too large a proportion of our scientific personnel toward the short-term, very-high-risk ventures. These gambles, if they pay off, are superb, but if they do not pay off—and they all certainly will not pay off—the work itself does not leave us with the necessary new leads to pick up and go on again in other directions.

Consequently, when we seek to establish such a target program we must be convinced that they are of sufficient significance to warrant these hazards. Also, in the aggregate, programs of this general sort should not be of such total size that the more general, the more unrestrictive, and the more fundamental research cannot proceed.

APPORTIONMENT OF NIH PROGRAM DOLLARS

The budgets of the National Institutes of Health in the extramural program, and in research covered by some of our technical-assistance programs, are such that about $2 to $2½ are spent for unrestricted research for $1 of the strictly developmental research. I believe this is a sound program and a balanced one.

In the developmental type of research, in addition to cancer chemotherapy, I would include the studies on psychopharmacology and those concerned with the influence of perinatal happenings on the subsequent development of metal retardation and cerebral palsy.

I do not hold that there are not other areas in which large-scale programs of this sort should be established; nor do I hold that these programs or programs of this general type should not be expanded. I do have serious concern for the maintenance of a solid and broad base for the superimposing of these more practically oriented programs. We must always keep this need before us and, before we embark upon a program involving specific application and direction of wide resources, be certain that in so doing we do not destroy the very base of fundamental unrestricted work upon which it rests.

This is my attitude, sir.

Senator HILL. Doctor, I wish you would enter your comments and your views with reference to these research grants which we make to our schools and universities, as to wether they are helpful to the institution, whether they are helpful to education itself insofar as institutions are concerned; and do they fortify the institution or do they perhaps maybe divert the institution in their reduction programs?

Dr. SHANNON. Well, Senator Hill, I am glad you posed that question because I think in the frantic—and I say "frantic" advisedly—

in the frantic search for free and uncommitted funds by universities and medical schools, certain statements have been made that are not supportable by fact. Nothing could be further from the truth than to say that our research grants have done harm to the institutions that accept them. In point of fact, if today one were to withdraw research grants from availability to institutions, I am convinced that many of our institutions concerned with medical education would collapse.

Senator HILL. Many of them would collapse?

Dr. SHANNON. Yes, sir. There is no doubt about that in my mind and I am sure that Dr. Smadel and Dr. Van Slyke would agree completely with this point of view.

Further, apart from their essentiality in this regard, these research grants provide an enrichment of the intellectual life of an institution that can only be provided by the presence of a broad and vigorous research program. Also, our training programs expand many of the specialty areas within a medical school and again enrich the educational environment.

CRITICISM OF RESEARCH GRANTS

I think that individuals that say our research grants have been bad mean that they do not satisfy the very urgent, much less the total needs of the schools. Also, that they create certain imbalances between research and education which, if continued long into the future, will in fact do some harm to the basic educational mission. I would agree that they are not a substitute for the more unrestricted type of funds that heretofore institutions obtained from endowments. However, even the most rabid individual who is searching for ways and means of supporting the primary mission of the medical schools cannot with justice say support of research at the present level and by present devices is bad.

On the other hand, I do realize, Senator Hill, this statement has been made but I think it has been made unwisely and without due thought of the consequences that would result from the loss of these funds.

Senator HILL. And without substantiation?

Dr. SHANNON. Yes, sir.

Senator HILL. Because, instead of being harmful, they have definitely been helpful.

Dr. SHANNON. Sir, they have been so helpful that, as I say, medical education could not be where it is today in the postwar period without the research-grant funds and the training funds that have been made available by these programs.

But, again, I would emphasize the remarks I made earlier relative to the instability of our institutions of higher learning. Within this context, I would agree that a simple increase in grant funds and a simple increase in training funds will not resolve the broad operating problems of these institutions. The comment is wrong, but there still remains a very real basis for dissatisfaction and uncertainty as to the future.

Senator HILL. I find from contacts with most of the deans that they feel that these grants are most helpful; they do feel that we should meet these overhead costs; and that they do feel the need of additional funds.

But, certainly, I think most of the deans that I have had contact with from the leading medical schools substantiate the statement which you have made here this morning.

Dr. SHANNON. I am sure they would. I am sure most thoughtful persons would.

Again, I would emphasize that however important they are they are no substitute for the more fluid type of unrestricted support, which is the thing that is needed to stabilize our institution.

Senator HILL. Yes.

PROBLEM OF AGING

Doctor, I believe you made grants to Duke University and Vanderbilt in the matter of the problem of the aging, is that right?

Dr. SHANNON. Yes, sir. This is part of the program that was first discussed before this committee 2 years ago.

The background of these grants is largely an unsuccessful effort on our part to elicit serious interests in the problems of research of the aging on a sufficiently broad scale that we could be fairly sure in a 5- or 10-year period that we would have answers to some of the basic problems. Aging research, as I am sure you know, is not related to a discipline that it taught in medical school. Aging research stems from the curiosity of individuals, derived from very diverse disciplines, relative to the chemical and morphological changes that result from increase of age as separated from the effects of disease.

I believe the first systematic efforts to stimulate research along these lines came when Dr. Van Slyke, then Chief of the Division of Research Grants, established the gerontology study section. After some 2 or 3 years, he had then become Director of the Heart Institute, the study section was disbanded as the result of a complete inability to develop a substantial program. He then set up an Advisory Committee for Research on Aging. This group of advisers had the opportunity to study all research grant applications to see if out of their totality they could formulate a program or stimulate a significant amount of research.

I believe after the 2 years that was terminated.

Dr. VAN SLYKE. Yes.

Dr. SHANNON. Meanwhile we, in our intramural program, had established a significant effort on aging. Actually, the beginnings of this program go back to 1942 or 1943, and up until quite recently it was the only comprehensive program on aging in the country.

Some 3 years ago we decided that aging was a sufficient amorphous study, that it could only be properly organized were it encompassed within the institution aims of a university or medical school, where its objectives could pervade all departments. On the basis of this conviction we decided to establish the equivalent of research centers, university oriented. We envisaged the need for perhaps 4 or 6 of such centers. We thought these could be activated during a period of 5 years. The first of these was established and in operation approximately a year ago at Duke University. This was made possible by a grant of approximately $350,000 a year, I believe. This sum will progressively rise to perhaps $500,000 or $550,000 a year. The grant was made on a universitywide basis, it is to be implemented by a committee that is responsible, I believe, to the president of the university

and the program of research is to be integrated with an aging program of service that involves the entire State of North Carolina and many of the institutions contained therein.

STUDY OF AGING PROCESS

With this we had the first broad program, university centered, its aims and objectives being the serious study of the many aspects of the aging process.

Now, as you know, sir, our appropriations do not cover these important aspects of aging that are inherent in the socioeconomic conditions themselves and the environment in which the aging individual finds himself; but with whatever support we can give, Duke University, has applied to the Ford Foundation for an additional grant that can add to the biological, medical, and sociological aspects of aging that are truly covered by our appropriations those additional components that relate to the socioeconomic problems of the aged. If Duke is fortunate in obtaining such a grant we will have the first program in the United States adequately supported and with sufficiently broad objectives.

We then continued our negotiations with other universities and have recently made a grant order of $350,000 a year, to the Albert Einstein School of Medicine in New York. This study will address itself primarily to an interdisciplinary approach to the problems of biology of the aging.

We are negotiating further with one of the universities in California, another in Florida, and one in Oregon.

Progress such as this has been possible only since we were able to establish a Center for Aging Research. The responsibility of that center is to organize in a progressive fashion the development of these broad units of study and maintain cognizance of the smaller programs.

Now this, I might say, sir, could be considered to be a new technique in research grant support unless one has a very long memory. I say this since I, myself, have said repeatedly that this is a new technique for the National Institutes of Health. I could not have been more in error. I recalled just the other day that one of the first grants of the National Institutes of Health, after World War II, was to the University of Utah for a broad study of muscular dystrophy. The name of the principal investigator at the medical school was Dr. Max Winthrop, professor of medicine.

This grant, I feel, was the critical grant that modified the complete environment of this medical school and has since had profound effects upon its evolution into one of our better medical schools.

These grants, that is these large grants conceived on a broad scale, for work in broadly defined areas with broad objectives, I think, are going to be more and more apparent in our operations.

Senator HILL. Do you think you will proceed more and more with such techniques in the future?

Dr. SHANNON. Yes, sir. I would suggest you might talk to Dr. Heller about this problem when the cancer appropriation is considered. As a result of the discussions we had a short time ago, actually Monday morning, we believe that this is the only way to develop a realistic program on the virological origin of cancer in a reasonable period of time. We are convinced that this type of study can only be developed

by approaching it in very much the same way as we approached the aging problem, i. e. a limited number of grants of a large order of magnitude to supplement the large number of grants and at the more conventional level.

I think, as new subjects come up which warrant intensive consideration, we will turn more and more to this type of research support. Our results to date simply have been far beyond our expectations.

Dr. VAN SLYKE. If I may, I would like to say that I think the thing that Dr. Shannon has spoken about in the last few minutes emphasized the fact that we are interested in making changes with regard to longer support and greater stability. So it is not merely a question of funds but is a question of how do we conduct these programs best to suit these of the country.

Senator HILL. To get more stability, you claim that you should have more long-range plans which will give you a more permanent base, is that right?

Dr. VAN SLYKE. That is right.

Senator HILL. Is there anything else you want to add there, Doctor?

Dr. SHANNON. No, sir.

GENERAL OFFICE BUILDING

Senator HILL. Let me ask you about this. You recall July 1956, practically 2 years ago, we appropriated some $300,000 to the NIH for planning a general office building. We did not have a budget estimate, but we put the funds in the bill and those funds were approved by the Senate and by the House of Representatives.

We had hoped the building would have been built long before this time, but anyway we recognize the fact that we have increased the funds and that of course means the activities and naturally the personnel of NIH since 1956. What I would like to know is, whether or not your concept of a building now would be different from what it was in 1956 or whether or not you would need more money for the construction of the building at this time than you perhaps contemplated in 1956?

Dr. SHANNON. Senator Hill, we have anticipated your question since we know that you queried Dr. Burney about this when he testified for the general PHS programs.

Senator HILL. Yes, we have had some discussions and I think Mr. Kelly will recall we also had some discussion about it.

Mr. KELLY. Yes, sir.

Dr. SHANNON. I will endeavor to supply any general information your committee may seek on this project, but I have asked Mr. Albert Siepert, the executive officer of NIH, to come prepared with all pertinent details. The story on the office building is rather complex and I will first give you the generalities.

Senator, we have brought a rough contour model because it may help us visualize the situation. It seems, however, that we have lost the main building in transit, so we had better use this match box as a substitute on the model.

This office building [indicating] was authorized by making available planning funds amounting to $300,000 on July 19, 1956. At that time we were preparing our 1957 budget and the initial estimate

for a building was prepared with the idea to develop an office building that would satisfy the needs, primarily for the extramural operation, in the budget for fiscal 1957, and to provide some opportunity for expansion in the future with a rate of growth that was more or less implied in Secretary Folsom's 1957 budget.

Senator HILL. Is this the original drawing here, if I may ask?

Dr. SHANNON. I do not think so.

Mr. SIEPERT. The building on that drawing is represented here on the model by the matchbox.

CAPACITY OF BUILDING

Dr. SHANNON. The building was designed to satisfy the needs implied by Secretary Folsom's fiscal 1957 budget submission. This amounted to $127 million. The building also provided, as I say, for some expansion over the subsequent 2 to 3 years for additional personnel. In point of fact, it was designed to hold 1,100 individuals.

However, the sizable further increase in appropriated funds, received primarily from the Senate action, in fiscal 1957, required major increases in our staffing plans, and these would fully absorb all the space provided for later expansion. So we asked the architect as his initial mission to design a building that would satisfy our present known needs, but also his design should anticipate later expansion, estimated at about double the size of the initial building. In essence what he did was to design two basic wings such as this [indicating], together with a connecting piece primarily to house a cafeteria for use by both wings.

Senator HILL. This would be one of the wings [indicating]?

Dr. SHANNON. This would be the first wing [indicating] connected with a cafeteria, utilities, and things of that sort, and with a second smaller wing to the north of the first.

Senator HILL. Yes. Now did the original estimate of $5 million contemplate just the one wing?

ESTIMATE FOR BUILDING

Dr. SHANNON. The original rough estimate, which was one that we made at the National Institutes of Health without benefit of an architect, was $5 million and envisioned the completion of an initial building. The PBS figures on this building, when the architect furnished his preliminary plans, put that building at $5,576,000.

Mr. SIEPERT. The $5,576,000 includes the $300,000 already appropriated for plans.

Dr. SHANNON. When we realized that the office positions in the 1957 operating budget, if carried forward, would completely occupy the building, we got permission from the Bureau of the Budget for the architect to make definitive planning of a later expansion of the building, but with no commitment on the Bureau's part that we could go beyond preliminary plans. In other words, we wanted to be certain of the extent to which the distribution and amount of utilities and of services for the initially planned building, would at a later date satisfy the basic requirement of the second position of the program as well.

Mr. SIEPERT. May I interpose one statement there? By "definitive planning," what Dr. Shannon means here is that the Budget Bureau agreed that the architect should do the tentative sketches. There is no money in the $300,000 appropriated to do detailed working drawings for the second stage and that would involve considerably more funds.

Senator HILL. I understand.

Dr. SHANNON. So then we moved to a second stage in our planning for this, the architect proposed two structures, the second one housing an additional 500 office employees. The difficulty we face is that at the present time, if we could move into both the first and the second stage with the staff needed for our present 1959 program, these two buildings would be almost fully occupied.

Senator HILL. They would both be occupied?

Both wings would be fully occupied at this time as of today?

Dr. SHANNON. Yes, sir. So we felt then that the most logical thing was to expand these buildings for 300 more employees. The architect recommends placing 2 additional floors on the smaller one and making it (indicating) 2 feet wider and by also adding 1 additional floor to the initial building.

Senator HILL. Senator Dworshak, the doctor is talking now about the building to house the grants administration work at the NIH.

ORIGINAL BUILDING DESIGN

Dr. SHANNON. To recapitulate, the original building design for the first wing could provide only enough space for the positions occupied with staff today. Moreover, the architect's sketches for two wings would give only enough space for the new personnel yet to come on this year and in the 1959 budget. We felt that it might be unwise to go forward with a structure of less size than our needs and not fully utilize the site because once the building was up, there would be nothing that could be done to increase the capacity of the area. So we have asked ourselves, the architect, and a group of expert land planners this question:

Taking into account the access roads, the general site planning, and other important factors, what is the maximum capacity building that can be effectively placed on the site under discussion?

The resulting suggestion, as worked out by the architect, is to put 2 additional floors on the second building and, as I recall, expand the width by 2 feet, and then place 1 additional floor here on the first building [indicating]. Now, if the total building project were undertaken and completed as of today, we would have the ability to house the present staff which are in our requirements for the 1958 and 1959 budget, together with approximately 300 additional people, which would give us a conservative factor for future expansion. The relative costs on the three possible levels of construction would be about $5 million.

Mr. SIEPERT. $5,576,000 is the PBS estimate for the first stage.

Dr. SHANNON. Well, then, at the middle stage in round figures, $9 million, and the final stage about $10,300,000.

Senator HILL. Including the $300,000 already appropriated for planning?

Mr. SIEPERT. Yes.

Senator HILL. That would be the whole building, two wings and the connecting building?

Mr. SIEPERT. That would be the full project [indicating].

Mr. SHANNON. As I said in my opening statement, Senator Hill, our deep feeling is that just as soon as it is fiscally feasible, and I believe I am reflecting the attitude of the Secretary, just as soon as it is fiscally feasible, this building program should go forward.

EFFECT ON PROGRAM OF INADEQUATE HOUSING

At the present time, I would point to two problems. The first relates to the effectiveness of the administration of our extramural research programs. This is a prime factor in the effectiveness of the total research effort of this country.

Second, at the present time we do not believe that we are doing as effective a job as we could if the grants and training programs were adequately housed.

Senator HILL. You say you are not doing as effective a job as you can. Do you mean because of the fact you do not have adequate housing facilities?

Dr. SHANNON. Yes, sir.

We are geographically dispersed. Some of our staff is in Silver Spring and some in Bethesda.

Mr. SIEPERT. We rent two places in Bethesda.

Senator HILL. Two places in Bethesda and one in Silver Spring.

Dr. FELIX. That, Senator, for the mental health program amounts to an office located on the campus at NIH, two in the town of Bethesda and one in Silver Spring.

STUDIES ON PSYCHOPHARMACOLOGY

Dr. SHANNON. One of the program problems that Dr. Felix is trying to resolve is the proper administration of his studies on psychopharmacology. At the time the psychopharmacology studies were authorized in significant amounts, the only place he could find space for his program staff was in Silver Spring. Dr. Felix engaged the professional who had been utilized by the Institute in conjunction with the National Research Council in developing the first national conference on psychopharmacology. This was some 2½ years ago. Instead of being able to place a new professional to NIH, next to us, where we could have been of day-to-day assistance we were forced to place him with the administration of one of the more exciting programs in mental health in Silver Spring out of intimate contact with other programed areas.

This has been quite unsatisfactory and Dr. Felix is now making serious sacrifices relative to other more established areas of his program in order to bring this program of psychopharmacology back to Bethesda. We will have the ability to do a much more effective job when the program has competent advice available to it on an intimate basis.

This is just an example of what geographical dispersion means to program effectiveness.

Senator HILL. Do you have a good deal of that geographical dispersion with reference to other operations?

Dr. SHANNON. Yes, sir; we do. One of these relates to the developmental study on mental retardation. The staff is being gathered to develop an approach to the central analysis of data and doing this at a time when most of the grants have been made. The only place these people can be housed is in Silver Spring, which is literally 8 miles away.

Senator HILL. How many miles?

Dr. SHANNON. Eight miles.

Senator HILL. Silver Spring is 8 miles from NIH in Bethesda?

Mr. SIEPERT. No; it is 5, but it actually takes as long as 8 miles would because you have to go through the town to get there.

Senator HILL. You have to go through Bethesda and through a lot of traffic in Silver Spring?

Mr. SIEPERT. Yes, sir.

USE OF BUILDING T–6

Dr. SHANNON. I might point out one of the things which I did not mention in discussing the office building. This program envisages the tearing down of building T–6. T–6 is a temporary building erected to contain the Public Health Service during World War II. I think whenever one tears down a Federal building he must have to have a very good reason. T–6 is a temporary asbestos-type building. The functional arrangement of space is good, although at the present time it is so crowded that we have a turnover of personnel because of the very poor working conditions. However, the building is becoming unsafe. We have had our engineers go over it in order to determine how we can shore it up if possible. It seems unlikely that this will be possible. In addition the operation is such that it is mandatory to have access to a large number of files for the professional conduct of the program. This results in heavy floor loading. Literally, Senator Hill, the floors actually sag and buckle, and the repair bills each year are high. It is a flat top and you know flat tops in Bethesda, or Washington produce an impossible working environment during the summer. Air conditioning must be largely fed in, by multiple individual units. All of this we can and would agree to bear with, were it not impossible to do the job with any degree of excellence.

Senator HILL. In other words, you are saying that it is a very expensive operation?

Dr. SHANNON. Yes, sir.

Senator HILL. It is also expensive from the standpoint of the results that you get from your work.

Dr. SHANNON. Yes, sir.

I would like to say, how thankful we are that this committee made it possible to construct two animal wings which we have assigned as temporary housing for the office functions of the National Cancer Institute.

Without this new space it would have been quite impossible to have gone forward with an adequate program of cancer chemotherapy. I believe that an operation that has expanded as rapidly as this one

and inherently is so complex could not have progressed as it has unless they were housed within a single area as they now are.

Now as a temporary expedient, these animal wings make a fine bit of office space, but the research workers in the Bethesda area look at the office workers and their utilization of ainmal space. The result is the strongest proponents for the new office building program are our own research personnel because they want to get Dr. Heller out so they can raise animals.

Dr. HELLER. I am in the doghouse.

CHOICE OF SITE FOR NEW BUILDING

Senator HILL. How does this fit in, Doctor, with what we might term the master planning or overall planning for the National Institutes of Health?

Mr. SIEPERT. I will try to answer that. Our efforts throughout all of this have been to create a general office building in which we could place the top program direction of the Institutes and place together all of the extramural grants and training operations. These work with centralized records and processing in a very integrated manner, so that any geographical dispersion causes us real difficulty.

One of our problems, then, is how large an office structure would it take to put the operation back together properly and where do you place it on a site so that it does not conflict with other future development of the NIH reservation.

Last spring, or more than a year ago, we began a longer range planning of this land to determine how it could be developed in the best manner. About 6 months ago, we engaged 3 eminent experts in land planning who have now completed a master site plan for the total development of our 300 acres in Bethesda.

We placed no limitations on their thinking save one: That was that we felt that the site for the Biologics Standards Building was firmly committed because it was ready to go out on contract.

We are very glad that these outside planners concurred in this particular site for the office building and thought it was an excellent place for development.

The chairman of the group is Mr. Ralph Walker of the firm of Voorhees, Walker, Smith & Smith of New York. He is considered the dean of industrial research laboratory design in this country and we were very pleased to see that he recently received the Centennial Award of the American Institute of Architects for his distinguished work in architecture. Mr. Gilmore B. Clark, formerly chairman of the National Fine Arts Commission for some 15 years here in Washington, is a community and site planning expert in New York, and the third member is Gen. Otto L. Nelson, a vice president of the New York Life Insurance Co., in charge of their real estate development planning.

These consultants approached this site from this standpoint: They said that whatever you do it should be built in such a way that the traffic of the employees coming to this area [indicating] will not be thrown into the central traffic pattern around the other lab buildings and the Clinical Center. This means then that this traffic needs to come into the area via Rockville Pike or by an unimproved road called Cedar Lane on the north side of the reservation.

The consultants looked at the total site and said that if we expect people to be able to come in and go out of this area [indicating] with no greater difficulty than for the rest of our reservation, we can place a maximum of 1,100 parking spaces in this area, providing we tear down T–6, since its site is to be one of the major parking areas.

Their study of trends in parking for the future indicates that no building should be built unless we are willing to provide 70 parking spaces for every 100 employees. This is what industry, and the like, and all of their plants and laboratories are now trying to provide.

The figure of 1,100 then would mean a maximum office building of about 1,600 employees but in this structure [indicating], we are locating in the basement area of this building central lockering and custodial force facilities. These are people who will not be working during the same hours as these lots [indicating] are occupied, so we can go up to a maximum of 1,900.

The reason we would place these custodial people in this building is that we now have them dispersed inefficiently in many makeshift spots to which they were evacuated from other areas, in part, to provide more office space for other staff purposes.

ROAD DEVELOPMENT

I should say one thing more which I had forgotten on this, and this is important, that we do have a problem coming up in terms of adequate exit from this office building [indicating] along Cedar Lane, which is a rough and crooked road. We have gotten in touch with the Montgomery County manager in order to find out whether and when the county is going to improve the road. It is not in their plans to improve the road at any time in the near future, but they do recognize that getting 1,900 employees on and off two roads is an almost impossible community problem. They have said that they are willing to provide some money for improvement of that road and make it a four-lane divided roadway, which they would never do on their own, if the Federal Government, which owns half of the property alongside of it, finds a way to put up half of the cost of the roadway. They state that it will cost $200,000 to make that improvement from Rockville Pike to Georgetown Roadway. They have sent us a letter saying, in effect, that if the NIH approach work includes $100,000 to improve Cedar Lane, the county believes this road can be developed by the time the office building is ready.

Senator HILL. That is the unimproved road that you spoke of earlier?

Mr. SIEPERT. That is right; yes, sir.

Senator HILL. Did you discuss that matter with the Bureau of Public Roads?

Mr. SIEPERT. No, sir; because the Bureau of Public Roads would only be interested in roads which are a part of the Federal highway system. There is no possibility that this will ever become part of the Federal highway system. Rockville Pike is a Federal highway. The Georgetown Road is a State maintained highway, and this is entirely a county road about which we are talking.

Senator HILL. County access road.

Mr. SIEPERT. County access road.

Senator HILL. It is not even what you might call a State highway?

Mr. SIEPERT. No, sir. It is entirely the responsibility of the local county and the adjoining property owners to keep it in shape.

Senator HILL. Have you any questions, Senator Dworshak?

ATTITUDE OF BUDGET BUREAU

Senator DWORSHAK. I have 2 or 3 questions. I noticed, Mr. Chairman, that a request was submitted to the Bureau of the Budget for $5 million, but no funds were requested in the budget which was submitted to the Congress. Is that correct? Did the Budget Bureau consider this?

Mr. KELLY. I believe, sir, that in the development of the overall Government budget all of the possible emphasis was placed on national security and that by and large no funds for construction projects were included in the budget; however, the Budget Bureau supported us in proceeding with the planning of this and the Dental Building on the National Institutes' reservation, and the National Library of Medicine on the southeast corner of it. I guess part of the reservation has been reserved for the library site by the National Institutes of Health, with a view that the library construction would be requested in the subsequent budget. In fact, we hoped they would do it.

Senator DWORSHAK. Well, did the Budget Bureau recently consider this $5 million budget? In other words, this is a fine project and I share the chairman's enthusiasm. Now I was on this subcommittee 10 years ago when this plan was envisioned. I knew it then when we only had one-tenth of the overall eventual development placed before our committee. I was not too enthusiastic about it then, first, because I thought it was a poor site to clutter up that area contiguous to the National Capital with as important a project as this, which obviously had no particular relationship to the National Capital. I felt that way then. I still feel that way, but being a realist, we have to go along; you have 300 acres and I suppose that in the years ahead you will have buildings on every square foot of the 300 acres, and I hope if that eventuates that the taxpayers of this country will be directly and indirectly benefited by this development. I am sure the National Institutes of Health are very important in this overall program, but, as you said, we are dealing with national security, we are dealing with large deficits, probably a couple of billion dollars this year, $10 billion or $5 billion or $15 billion next year, and we have to do first things first.

This [indicating] is commendable. It is essential, but what I want to know is: Did the Budget Bureau consider it? Did it reject it? Did it say that we can defer it for a year or two—or what was done?

Mr. KELLY. Actually, just as a basic matter of policy, not with respect to this as an individual building, but with respect to all of the construction programs of the Department, they excluded them from the 1959 budget.

Senator DWORSHAK. That was on a categorical basis?

Mr. KELLY. Yes, sir.

Senator DWORSHAK. And it was with no particular regard to the merits or the urgency of this particular project?

Mr. KELLY. That is correct, Senator Dworshak. I think there is no question that the Budget Bureau staff recognized the need for administrative facilities at the National Institutes of Health. It was just a question of when they included them in the budget, not whether they would include them.

Senator DWORSHAK. That was the point I was trying to develop, Mr. Chairman. It is not that there is a lack of appreciation of this need, but whether or not it must be done in the next fiscal year or at some future time.

ADMINISTRATIVE PERSONNEL

In order to get a better understanding of this entire situation, let me ask this: How many employees do you have now? When I say that, I presume you have to break it down for this main building.

Dr. SHANNON. This is an administrative building, to provide space for the professional review and support of our grant programs.

Senator DWORSHAK. Where are these employees housed now? Are they in this main building?

Dr. SHANNON. There is no main building at the present time.

Senator DWORSHAK. Well, I mean that building there [indicating].

Dr. SHANNON. That is just an architect's sketch.

Senator HILL. That is just the drawing proposed by them.

Senator DWORSHAK. Do you not have personnel in your main building out there now?

Dr. SHANNON. Yes, sir; but that is not administrative, but entirely research. The administrative personnel at the present time are housed largely in T–6, in temporarily converted animal house wings, in office space which was originally built for warehouse space and in rented space in Bethesda and in Silver Spring.

Mr. SIEPERT. There is one building, the administration building, which was designed for office space in 1938. This may show it, Senator, if we take 1958 which is our current staffing situation. The building to which I think you were referring to as our main or big one, which is the Clinical Center.

Senator DWORSHAK. Yes; main Clinical Center.

Mr. SIEPERT. It is designed, however, primarily as a laboratory and hospital building. We have shown here [indicating] all of our people, including the research staff who do their research work in an office-type situation. There are a number of scientists that do that. The Clinical Center is supporting this much [indicating] of our office space as permanent space. Today we have in other buildings [indicating] another 65,000 feet of permanent office space. That figure includes, for example, our administration building which has been there since 1938. We also have some conversion of warehouse space, some of which we will hold permanently as office space. The temporary space we are talking about is primarily this structure here, which is T–6, consisting of 55,000 feet of office space directly, and pickup space at various other spots which had been diverted either from research needs or from essential servicing, in order to provide office space for the expanding extramural grants and training programs.

Senator DWORSHAK. That clarifies it materially.

Mr. SIEPERT. Finally, we are renting space on the outside.

TOTAL EMPLOYEES

Senator DWORSHAK. Tell me this: How many employees do you have altogether in all of the categories?

Mr. SIEPERT. In all categories on duty now, the NIH totally has 6,685 people. Bethesda has 5,962 people and currently has in office-type space at Bethesda, 2,267 people.

Senator DWORSHAK. Do you have to make a total of those three?

Mr. SIEPERT. No. The first figure is a grand total of 6,700, of which 5,900 are located on these grounds [indicating], and of the 5,900, there are 2,267 in office-type space, so each of those is a part of the other.

Senator DWORSHAK. Can you tell us how many administrative personnel you have included in that total?

Mr. SIEPERT. I can, but I do not have the figures now.

Senator DWORSHAK. Approximately? I mean the personnel that you are proposing to build these quarters for?

Dr. SHANNON. What Mr. Siepert means is, we can give you a figure for those quarters broken down in detail, but included in this so-called office space is a large number of straightforward research functions that use office-time facilities.

Senator DWORSHAK. What I am trying to find out is: how many administrative personnel you have now, approximately?

Mr. SIEPERT. I will have to supply that for the record.

Senator DWORSHAK. Well, are these not the buildings that you propose to house this administrative personnel in [indicating]?

Mr. SIEPERT. Yes.

Senator DWORSHAK. Do you mean that in your planning you do not envision how many employees will be housed in these quarters?

TOTAL SPACE ANTICIPATED

Mr. SIEPERT. When we are finished—that is, if this structure is built in future years, we would envision a total office space of 387,000 square feet, whereas today we are at 287,000. We envision the deletion of temporary space and rental space and the total amount of personnel requiring office space including research personnel, administrative personnel, and grants and training people who are not administrative people but they use offices anyhow—that altogether would total 3,000 people.

Senator DWORSHAK. And that is compared with the figure in 1958 of 2,267?

Mr. SIEPERT. Yes, sir.

Senator HILL. This is over how long a period of time?

Mr. SIEPERT. This is projected into 1960.

Senator DWORSHAK. Fiscal year 1960?

Mr. SIEPERT. Yes, sir.

Senator DWORSHAK. Are you asking for funds to add all of these employees? The first part of them would have to be added in fiscal year 1959.

Mr. SIEPERT. Because of our space problem, we are lagging behind in the positions that are authorized to move this extramural program. Of the total number of people, 3,037, that would be shown here [indicating], the 1959 budget before you actually would have all of these positions save about 300.

Senator DWORSHAK. Well, this building could not be completed in time to house the 500 additional employees that you referred to?

Mr. SIEPERT. Yes. I think just before you came in we made the point that a part of our problem is that the expansion of the extramural program has moved so much faster than the original projections that by the time the Congress finished action on the President's budget for 1957 it had provided a program which required personnel sufficient to have filled up the entire building that we were asking for. There was no lead time left in that building.

Senator DWORSHAK. Are any administrative personnel now taken care of in your clinical building or is that used entirely by doctors and scientists and research workers?

Mr. SIEPERT. The Clinical Center is used entirely by people who are involved in the direct operation of the laboratories and the patient services that are within that building.

NECESSITY FOR INCREASE IN PERSONNEL

Senator DWORSHAK. What necessitates the increase of 800 administrative personnel in the next 2 years? Who is doing the work that the 800 will do subsequently?

Dr. SHANNON. May I answer that, Senator Dworshak?

Senator DWORSHAK. Yes.

Dr. SHANNON. I made the point that at the present time we are not very happy about the way we are conducting many of our programs. We feel for the amount of money being spent that if we had adequate administrative personnel, it would be spent much more effectively. I would like to talk in terms of dollars now. At the present time, our program which relates wholly to the extramural operation amounts to $39 million in fellowships and training, and $98 million in research grants, which amounts to $137 million. We feel that this $137 million could be more productively utilized if we had the staff time to do a better job. The building that we are talking about here to house the presently authorized staff would be a onetime expenditure of approximately 6 or 7 percent of what we spend annually to conduct the program. It is our feeling that a situation wherein we are not getting the greatest return for our annual expenditure should not persist indefinitely.

Senator DWORSHAK. I share your apprenhension on that point, but it seems to me that the experience in Washington has been that whenever you build an administrative or office building of any kind for Federal employees, whether you need their services or not, eventually they employ additional personnel because they have to fill the building. Now, is that what you are going to do here?

Dr. SHANNON. We have never been in that position, sir, because we have always been in the position of trying to find space to keep up with the program needs that the Congress has outlined for us. There has never been a question of having the luxury of space. Sir, I would like to have you walk through T–6, this old asbestos-covered building with sagging floors, where in certain of the areas, I would guess around 15 by 15 feet, you have as many as 3 or 4 typists with files and whatnot. Then, too, you have highly paid professional personnel housed in an equally poor manner.

Senator DWORSHAK. When was that building constructed?

Dr. SHANNON. 1942.

Mr. SIEPERT. This is the building (T–6) which was constructed, I believe, in about 75 days, when the Public Health Service was required to evacuate its headquarters on 19th and Constitution for the use of the Joint Chiefs of Staff during the war.

GROWTH OF CLINICAL CENTER PROGRAM

Senator DWORSHAK. When your clinical building was originally planned and construction started about a decade ago, what were your plans then for housing administrative personnel?

Dr. SHANNON. It was never encompassed in our thinking that we would use space as expensive as that for administrative personnel.

Senator DWORSHAK. You did not anticipate that you would have that many, probably?

Dr. SHANNON. Sir, at the time the Clinical Center program was conceived, I think that if anybody had said it would be possible, within the short time of 8 years, to mount a research program of such depth, breadth, and productivity as we have today, they would have been called crazy.

Senator DWORSHAK. In fact, you had only about 1,200 or 1,300 employees a decade ago, did you not?

Dr. SHANNON. What was that figure?

Mr. SIEPERT. 1948 would be about 1,400 or 1,500 employees for the field and Bethesda combined.

Senator DWORSHAK. And if I recall the testimony at that time when the clinical building funds were requested, it was that you would increase your total personnel to about 2,500. What is it today?

Mr. SIEPERT. 6,685.

Senator DWORSHAK. You have certainly gone ahead and I suppose you have rendered some worthwhile service, but the perspective that is presented now to the committee in a realistic manner is that you have increased from about 1,400 to 6,685 in less than 10 years?

Dr. SHANNON. Yes, sir.

PROJECTED FUTURE DEVELOPMENT

Senator DWORSHAK. Where will you be a decade hence?

Dr. SHANNON. Well, sir, I can make such realistic projections, but I would rather not, because at first sight, without being able to develop the reasonableness of the basic premises upon which the projections are made, I think that the projections, themselves, would shock you. Now if you wish, I would be glad to do it.

Senator DWORSHAK. No; I do not want you to go into too much detail, but I think that would have a bearing on whether this should be, so far as I am concerned, given some consideration now. Has the House considered this?

Dr. SHANNON. No, sir. This has not come up for discussion in the House.

Senator DWORSHAK. Why was it presented?

Dr. SHANNON. This came up incidental to Senator Hill's discussion with Dr. Burney on the generalities of the construction programs of the Public Health Service. It was decided to put consideration of this building program off until I came to testify. I agreed to come

prepared to discuss the program in detail. What you see here, this matchbox, is the building that fell by the wayside.

Senator DWORSHAK. But, Doctor, you did consider within your offices this proposed development or you would not have asked the Budget Bureau for $5 million.

Dr. SHANNON. Well, I might say that the Budget Bureau has not evinced any disbelief of these needs at all.

Senator DWORSHAK. No; I am sure of that. It is just the timing that we are interested in.

Dr. SHANNON. Yes. I would like to point out what the Bureau of the Budget has done. First, we planned this building No. 1 and discussed with them the likelihood of its long-term inadequacy. We then requested permission to plan for an addition in a general way to satisfy needs not predictable at that time. They agreed to let us go ahead and to permit preparation of the tentative sketches for this larger building program we have outlined to you. There has been no serious question as to the unreasonableness in this approach to it. We have not, of course had approval to go forward with final plans of the total complex.

PROJECT PRIORITY INVOLVED

Senator DWORSHAK. It is merely the consideration of priority and what should be done insofar as construction projects are concerned; and while this—maybe indirectly—has a relationship to our national security—I am sure it does—and to strengthening the fiber of our American citizenry, the question does arise as to whether it is deserving of any priority as we consider the need, for instance, of the President's having submitted two supplemental budgets for national defense, totaling about $3 billion, since his first defense budget was submitted in January, so we are moving along on the defense front also, $3 billion, and I am not unfriendly to this overall program, and my questioning was not inspired by any desire to embarrass you, nor to oppose you on this overall planning, but rather because I feel very sincerely that the main question facing the Appropriations Committee today, and its several subcommittees, is this: What should be given priority as we face the certainty that we shall have large deficits at a time when American taxpayers are clamoring for reductions?

Dr. SHANNON. That is a point of view that I fully appreciate, both in its generalities and as to detail. Our position in matters such as this stem from our need to indicate professional opportunities and estimation of needs. The second judgment, that is overriding of others, is the judgment that has to be made by you gentlemen, as to the relative merits of competing needs. I realize fully that we cannot do everything that we would like to do. I would not wish you to think that I am intemperate in my approach.

Senator DWORSHAK. I do not, but I do realize you are dedicated to this program; and, if you were not, I would think something was wrong.

Dr. SHANNON. Yes, sir.

Senator DWORSHAK. I mean the overall program.

Dr. SHANNON. Yes, sir.

Senator HILL. Well, I raised the question about the building, did I not, Doctor?

Dr. SHANNON. Yes, sir.

Senator HILL. And asked you the other day to be sure to come prepared to answer questions about the building, having some knowledge of what your situation is there, and how inadequate your facilities are, and how much inefficiency, if I may say, and waste there may be in having us bothered with having the Institute part in Bethesda and part over in Silver Spring and then the inadequate facilities there at Bethesda itself. How much are you paying in rents now, Doctor? If you have not these figures, you can supply it for the record.

RENTAL PAYMENTS

Mr. SIEPERT. About $90,000 a year is currently being paid, Mr. Chairman. Under arrangements this year, however, the rental costs after the first year are actually taken over by the General Services Administration, but this still costs the Government the same amount.

Dr. SHANNON. On this problem of rentals we have the question of finding suitable rental space, so it is not just the problem of rentals.

Senator DWORSHAK. You would not have that problem if this entire project had been located in some other section of the United States. This could have been anticipated, the reason you are mushrooming, and we knew it 10 years ago, that you were going to, and, as you said, you would shock us if you told us what the outlook might be a decade hence; so you are going to have this recurring problem always, because you are in the most congested area in the entire country. We all recognize that.

Pardon me for interrupting.

Mr. SIEPERT. There are private builders who talk with us about putting up nearby rental space, but they always seek conditions which are quite unacceptable for the Government to engage in, for they want an assurance that the building will pay out with long-term Government tenancy and we cannot give that assurance because GSA rents always on a year-to-year basis.

Senator HILL. What you really do under those contracts is, you pay for the full cost of the building and you pay the interest, too. You no doubt pay a higher rate of interest than the Government pays; is that about right, Senator Dworshak?

POSSIBILITY OF LEASE-PURCHASE PROGRAM

Senator DWORSHAK. Yes; I am sure. I was going to ask whether there has been any exploration of the possibilities of the lease-purchase program that has been promoted so aggressively by the administration?

Mr. KELLY. Senator, that was discussed with respect to this building at one stage and rejected, because it is a Federal reservation, and there is a necessity to tie in utilities and so forth on that reservation.

Senator DWORSHAK. Thank you.

Senator HILL. But you are paying today some $90,000 a year for rental?

Mr. SIEPERT. Yes. And under these space plans [indicating] it will be necessary to pay in this next year practically double the amount of rent. This is the $90,000 worth so far [indicating]. In order to accommodate the 1959 staff, we will need to rent at least this amount of additional space [indicating].

Senator HILL. The Budget has recommended, and it has been substantially approved by the House, your rental for this next fiscal year then would be $180,000 rather than $90,000; is that right?

Dr. SHANNON. In round figures.

Mr. SIEPERT. It will go from 25,000 square feet to 55,000 square feet of space, approximately.

Senator DWORSHAK. What necessitates this material increase in personnel? Most of your work is handled through grants to universities and other institutions. Are you increasing the workload at the clinics or what is it? I am not entirely sure that I understand why this great increase is necessary.

Dr. SHANNON. I would like to refer this to Dr. Van Slyke, who has general responsibility for this broad area.

Senator HILL. All right, Dr. Van Slyke, if you will?

WORK OF ADMINISTRATIVE STAFF

Dr. VAN SLYKE. I think, Senator Dworshak, it must be recognized that when Congress puts in our hands these big funds for research grants, more research grants around the country, and for the training of young men and women to carry on research and clinical research, too, that we have a terrific responsibility to the Congress to see to it that these funds are spent in such a way that we get every nickel's worth that we can out of those funds.

Now, the cost of administering these funds and keeping, shall I say, effective liaison with the people who are spending the moneys which you appropriate, costs us about 2 3/10 percent, a little more, a little less, depending upon the program, of the funds that are granted. This calls for collecting scientists around the country who can conduct scientific reviews and advise us as to who should get the funds or where they should go, and what should be the modifications of these programs. It involves setting up travel teams, if you will, so that, when we get the health-research facilities, the $90 million that we are spending in 3 years, that we can send people to the local cities to inspect and talk with the officials of those places in order that they will know, not just from a piece of paper, but from firsthand knowledge, what these things are. There is a flood of paperwork involved in it, and I think we are getting in the neighborhood of 15,000 research-grant applications alone. That is a terrific chore, to duplicate those things, and put them in the hands of advisers, and to carry through the work and do the auditing of these grants so that nobody is cheating on it. When you talk about administration, sir, I think you probably would agree with me that it is not administration that you and I might ordinarily think of, but rather a review and approval activity for these funds that do not come to us, but through us, and to the scientists in this country.

EMPLOYEE HOUSING

Senator DWORSHAK. Now at that point you say you send out travel teams to check on the institutions and individuals which receive these grants. Are all of your administrative employees housed in Washington, or do you have an office in Chicago, or one in Denver, or one in New Orleans, or do your traveling teams all stem out from the National Capital?

Dr. VAN SLYKE. I will answer the second part of the question first: All of our review-and-approval folks are here in the Washington area.

Secondly, the travel teams are not, by and large, our employees. Our employees go with them to serve, shall I say, as aids to these non-Federal folks who advise us in these areas.

Senator DWORSHAK. Do you have any employees or personnel in NIH not living in the National Capital? Do you have 1 percent outside or 100 percent of your personnel living right here in the Capital area?

Mr. SIEPERT. Of our on-duty strength, out of 6,685 positions which we have on duty, 5,962 are in Bethesda, which would mean 700 of our staff are outside of the Capital.

Senator DWORSHAK. Where do they live, generally? Are they scattered all over?

Mr. SIEPERT. In field stations of one sort or another, a few laboratories.

Senator DWORSHAK. Are some outside in territories?

Dr. VAN SLYKE. Do not forget that we are talking about all of our Rocky Mountain Laboratory in Hamilton, Mont., which would have in the neighborhood of 150 or 160 people.

Senator DWORSHAK. They serve the Northwest?

Mr. SIEPERT. Yes ,sir.

Dr. VAN SLYKE. Do not forget that we are talking about all of our staff and I was referring merely to the Review and Approval employees. We do have a certain number of our folks who are conducting, shall I say, experimental demonstration studies, cervical psychology, the detection of cancer in women, and so on, and some of those are located elsewhere. For instance, in Memphis we have quite a few.

Senator DWORSHAK. What do the people do in Hamilton.

Mr. SIEPERT. That is entirely research.

Senator DWORSHAK. What kind of research?

Dr. SHANNON. It is oriented largely to those research problems incidental to the Rocky Mountain-Northwest area. This laboratory has been traditionally a station which has had the medical problems of the area as a mission. This was one of the early public health research organizations. Its problem was to attempt to solve—and in fact did solve—the problem of spotted fever. A related disease was also intensively investigated at Hamilton, typhus; out of this came the eventual preventative in the form of a vaccine. An effective vaccine was also developed for spotted fever. Other studies include encephalitis, Colorado fever, tick fever and similar things.

Senator HILL. Do you have anything else Senator Dworshak?

NEED FOR DECENTRALIZATION

Senator DWORSHAK. No. I just wanted to develop this particular question, because it seems to me that we have this terrible congestion in the Capital, which you realize as is manifested by your testimony, and which is what the committee hears about from practically every agency in the Government, that effort should be made to decentralize and place in the field that personnel which can work effectively in those areas without being housed in the National Capital. That is the very point I had in mind.

Senator HILL. Senator Smith.

Senator SMITH. Mr. Chairman, I do not think I have any questions. I did not get to hear the earlier testimony and I do not want to take issue with my distinguished friend and colleague from Idaho.

Senator DWORSHAK. Go ahead.

VALUE OF WORK AT NIH

Senator SMITH. That is because I think he is just as sincere and serious as I am, and for that matter, the chairman or anyone else on the committee, on this matter, which is close to all of us, which is our health, and I want to compliment all of you on what you are doing out there. I am sorry that the progress has been so rapid that we have not been able to stop and organize it so as to proceed in an orderly way, and I am always amazed to hear what is going on out there, and hear of the accomplishments that are coming forth. I think that if the whole budget which is $211,183,000, was spent and any progress was made, or just the progress that is being made on cancer research alone, came out of it, we would still be way ahead of the game. I cannot believe, Dr. Shannon, that the public or the committee would be shocked. I think the public is looking for leadership in this matter. I think if you would take it upon yourself to give us what you think the future holds at some time when it is convenient, that it would be a way to educate the public and have them accept what the public needs. I am not shocked, and I am sure I can be shocked as easily as anyone.

I think this waste comes about greatly because you had to do it in a hit or miss way, rather than in an organized and orderly way.

Dr. SHANNON. It was very nice of you to say those things, Senator Smith. When I said "shock," I really used an inaccurate word. The future occupies, if anything, as much or more time in our thinking as does the present. When I look at what has happened in the past 20 years in the field of medical research, at the economy of the country as a whole, at the gross national product increasing since the turn of the century, at approximately 3 percent annually compounds; and as I look at overall research development in relation to the gross national product increasing from the 1940's to the present time from 1.0 to 2.5 percent, at the medical research, portion of total research and development over the past 10 years, being 3.75 percent I think that we are seeing just the beginning of what is going to be the greatest revolution in medical research the world has seen. Further, I am convinced that fortunately, the United States is in a position to give leadership to all this. This period will be, I am convinced one of the proudest we can look back on.

PROGRESS IN MEDICAL RESEARCH

Senator SMITH. I appreciate what you said because I agree with you completely. I think the one way that we can get back into our role of leadership in this world is in this progress made in medical research.

Dr. SHANNON. Senator Smith, I would like to say one other thing, and that is, although I think we have problems, and I am the first one to admit them, I also am the first one to point out that the progress we have made has occurred at a fantastic rate. Each year we present for our congressional committees the highlights of research progress. Now this highlights statement [indicating] contains summaries of some of the concrete advances. Not only as these relate to the saving of lives, but in their extension of a healthful life. We should not be concerned only with the saving of life.

Now, if one makes any projection forward as to the consequences of today's advances, you are forced to an appreciation that medicine, as well as other advances such as automation, is having a profound effect on our people. Medicine, I believe, is going to have as profound an effect on our people as any of the other results of the tremendous technological advances of today.

We have problems and always will have problems, but we always, I think, are going to have even more striking advances.

Senator SMITH. Of course, in research, that is one place we want to prevent waste, but in order to make progress you have to perhaps have a little more waste than you would in the ordinary procedure.

Dr. SHANNON. "Waste" is a nasty word, Senator Smith.

Senator SMITH. It is, but duplication or overlapping, I would suppose, would be better.

Dr. SHANNON. I think there is surprisingly little of that—people do the same things, but they do them in different ways and usually get somewhat different results. And then there is that term, "serendipity" that one must appreciate which probably is basic to the concept of the need to support unprogramed research. Frequently, by advances through serendipity, the keen observer will observe something that is incidental to the main stream of thought. From the standpoint of his planned research, it is not infrequently more profitable to follow such an incidental byproduct than the initial plan—chance, you know, plays an important role in research. Now waste is a thing you can only guess at, at the time it is occurring. When one looks back at the progress over the past decade, one finds that things that appeared wasteful at the time very frequently are, in retrospect, aids to new discoveries.

BEGINNING OF ANTIBIOTIC ERA

I would like to give you one example—and this has been used many times, but it is so typical of the characteristic of research which I have called serendipity.

Flemming was a bacteriologist working in one of the London hospitals. In his studies of bacterial growth he noticed one day that one of his bacterial plates had become contaminated with a mold.

He could have become quite upset at the time because here was an experimental setup to define certain things relative to a bacterial study, and the plate designed to answer certain questions could not; it was contaminated. Well, in the ordinary course of events he might well have thrown the plate out.

Fortunately, he did not, for he noticed that as the bacteria grew across the surface of the plate there was a clear area around the mold.

This puzzled him. He could not understand why the mold should be surrounded by a clear area into which none of the bacteria grew.

The exploration of this accident was the beginning of the entire antibiotic industry and a new era of medicine.

So when I look at the word "waste", I think a lot of the things that we think of as waste at the time are perhaps due to phenomena that as yet have not been properly interpreted.

Dr. VanSlyke. Do you not think that waste might properly be described as negative results which actually form a very fundamental basis for future tests?

It is important to have negative results just as well as positive results.

Senator Smith. You have said exactly what I was trying to say, only you said it in so much nicer a way; I didn't get across what I had in mind.

Again, as I look at this budget, I think we all have to die some time, I presume, but I do not want to go through that terrific suffering that goes with cancer, and even though you do not finally cure it—and I think you are going to—but even though you do not, all of the time you are doing things that eliminate the terrific suffering that comes with it, and as we lose our wonderful colleagues, and more and more are going, I feel more and more that we can never do much in this line.

You have my good wishes in anything that I can do, Mr. Chairman to cooperate with them.

Senator Hill. Fine. That certainly gives your true feelings from the very beginning.

WISDOM OF CENTRALIZATION OF WORK

Senator Dworshak. May I interject this? I want the record to show that I am not opposed to this development of the National Institutes of Health. My primary concern was whether all of this has to be centered in the congested National Capital area, and whether you people who are charged with administration and supervising this entire program are aware of the possibility of decentralizing at least some of your activities? That is my primary concern.

Dr. Shannon. And this has concerned us, and I fully agree with that aspect, Senator Dworshak. As I say, on the other hand, the review of research grant programs, meetings for national competition for funds, one institution with another, probably never can be done on a decentralized basis.

Now, to mention another concept that I don't like, when you said that eventually we will have every square foot of the NIH reservation cluttered with buildings, you made me shudder.

Senator Dworshak. I was trying to shock you. It was just reciprocity.

Dr. Shannon. As a very positive matter of program planning, we feel that so far as the direct research operation in the Bethesda area is concerned, except for very specialized needs, we would not like our operation to grow further.

Senator Dworshak. But it will. That is why it takes the very expert planning.

Dr. SHANNON. I think it could, over a very long period of time. However, we, above all others, appreciate that we have come through a period of very rapid growth and we feel that now we have to consolidate our gains and reshuffle our cards, and perhaps feel our way around.

There are certain areas that we are quite convinced will require some further expansion, but they are very few.

We feel we have a sufficient, complex organization; we have sufficient help and have sufficient excellence in our scientific personnel that we do not look forward to major expansions within the next decade.

Mr. SIEPERT. The master site planners, incidentally, have very positive ideas on the ultimate future of this reservation. In looking at the total development of it, they have shown us on their plans that it would be unwise—and this is only a land question now—it would be unwise to provide more than five additional major building sites on this reservation. By "major building sites" they are speaking of a structure that is the same general size and character of our usual laboratory buildings such as the cancer building [indicating]. Now, they are not calling the shots as to what that function might be, but in terms of the optimal relationships on the land, the traffic patterns, the number of people who would be involved, they say—I think their words are: "The number of sites indicated is the maximum consistent with good land utilization principles and with the character of the installations as already established."

What we all are afraid of is what happened at the Bureau of Standards on Connecticut Avenue where, to use your words, every square foot of land was covered with a building of some sort.

ADEQUACY OF CLINICAL FACILITIES

Senator DWORSHAK. Are you already outgrowing your clinical facilities?

Mr. SIEPERT. No, sir.

Senator DWORSHAK. They are adequate for many years?

Dr. SHANNON. I think they are adequate for all time—I really do. We have operated for the past year essentially at full capacity for the first time. We feel that what will happen in years to come is, to emphasize certain programs at the expense of others. The total facilities provide 514 beds. When consideration is given to females and males, adults, and children, we can have about 400 patients at the maximum. We do not envision at any time an expansion of that facility.

Mr. SIEPERT. We do feel—and there are trends in this direction—wherever a clinical problem comes up that involves obtaining information from large numbers of patients, if the Clinical Center is not a facility adequate to handle this, we will be going to where the clinical material is.

TYPES OF DECENTRALIZED RESEARCH

In other words, we will go into hospitals in other parts of the country with our research teams.

Senator DWORSHAK. Instead of bringing the patients in here?

Mr. SIEPERT. That is right.

Dr. VAN SLYKE. As we are doing now with cancer chemotherapy, in which we use many hospitals where the cancer patient is present.

Mr. SIEPERT. And as we are doing in Baltimore for gerentology and in mental health at St. Elizabeths. We have some mental health beds in our Bethesda clinical facilities, yet the major expansion of that program this year is a cooperative project with St. Elizbabeths. We are prepared to go where the patients are.

Dr. VAN SLYKE. I want to mention what Dr. Shannon referred to, the extramural program of the National Institutes of Health.

There are vast areas, such as the gerontology matter, which is only getting started around the country where we are, in essence, decentralizing, if you will, because the scientists are there and the opportunity is there. We have to do that on a national basis because we have such matters to consider as climate, soil, trace elements in food, and so forth, so it really cannot be done in just one spot.

Mr. SIEPERT. Our entire cancer program in cervical cancer involves, for example, examinations of thousands of women. This is entirely a decentralized operation in cities all over the country.

Senator HILL. Is there anything else you would like to add to that?

BACKGROUND STATEMENT ON CLINICAL CENTER

Dr. SHANNON. I have a background statement on the Clinical Center which I might file for the record that should help to amplify the testimony we have given with respect to the Clinical Center.

Senator HILL. That statement will be inserted in the record at this point.

(The statement referred to follows:)

The years since the first patient was admitted to the Clinical Center on July 6, 1953, have brought not only experience in organizing and operating a unique facility, but also opportunity to test an experiment in research administration that is without parallel in the history of medical science.

The Clinical Center was founded on several bold concepts:

1. It would permit coordination and unification of the many highly specialized branches of research medicine and the biological and behavioral sciences without sacrificing either the advantages of specialization or the scientific freedom so essential to individual creativeness.

2. A massive concentration of laboratory and clinical research would attract scientific visitors from all over the world and stimulate interchange of ideas, new facts, and special skills.

3. Large numbers of especially selected study patients, maintained under hospital care as long as necessary, would permit a shortening of the traditional time lag between basic science promise and clinical application to the sick patient.

4. The center would provide opportunity for testing new methods, techniques, apparatus, and organization patterns which would benefit research groups throughout the Nation.

5. By providing intensive experience in high-quality experimental medicine to rotating groups of promising young physicians and to guest scientists, it would enhance the research and teaching potential of the Nation's medical schools, universities, and industrial laboratories.

Serious research of any kind is a long-term process. Creating a new, large institution that is without precedent is also a lengthy undertaking. However, in the nearly 5 years that have passed since the Clinical Center opened, there have been many indications that these underlying concepts were valid.

There have been numerous instances where the juxtaposition under one roof of widely varied disciplines has helped overcome the handicaps inherent in the extreme specialization of modern science. Ability to select patients from all over the country—patients with highly specific disorders, or rare combinations of illness needed for particular research projects—has undoubtedly already af-

fected the time factor in many instances. Among the research accomplishments that will be described by the several Institute Directors are many instances of this conceptual advantage of the Clinical Center having been validated through actual experience.

NIH has always played an important role as a meeting place for interchange of scientific and technical knowledge among physicians, medical and laboratory scientists, professional and technical workers, and research administrators. That role has become vastly more important with the addition of the clinical program. It is estimated that during 1957, more than 8,000 visited NIH to give or receive consultation, attend seminars and other scientific meetings, or to observe and inspect.

Particular note should be given to the number of foreign scientific visitors. A steady stream of them pours through NIH. What they observe is bringing worldwide prestige to the quality and scope of our Nation's medical research.

Another group worthy of note consists of hospital administrators, supervisory nurses, and technical workers. As a result of the great intensification of basic laboratory work that has occurred in the last decade, their hospitals are anticipating the need to engage in clinical evaluation. They come to Bethesda to inquire into our experience in this field and to learn the special problems of caring for research patients and the techniques being evolved by the Clinical Center.

Since 1953 nearly 200 carefully selected young physicians have spent 2 or more years in the Clinical Center as participants in research. Next year and each year thereafter, some 70 or 80 will complete their work in the NIH clinical program. Each year, these men will fan out over the country to the faculties of medical schools and universities, to laboratories, to foundations, and some into the private practice of medicine. There are many concrete reasons to believe that they will greatly strengthen this country's medical science structure because of their experience at Bethesda.

The first 4 years have been a period of slowly building a balanced structure of available hospital beds, supporting patient care, and diagnostic services, keyed intimately to the building up of research teams and programs by the several Institutes. It was also a period for devising administrative, policy-forming, and daily work patterns that would function efficiently in an extremely complex organizational structure. An underlying, compelling consideration throughout has been the obligation to insure the best possible care for that indispensable partner in all clinical research—the patient.

Similarly detailed and careful attention has been given to the development of effective working relations with another indispensable partner—the patient's own physician. Every Clinical Center patient must be sent to us by his own doctor. To obtain the referring physician's cooperation, methods were found to inform him of the precise but infinitely varied and constantly changing diagnostic requirements for the currently active studies, and to assure him that his patient would receive excellent care.

Other equally important problems remain less fully resolved. Perhaps the most important of these is the problem of recruiting sufficient numbers of the highly skilled professional and technical workers needed to provide the high-quality patient care and diagnostic service absolutely essential to clinical research. Well-trained radiologists, anesthesiologists, nurses, and laboratory technologists are in particularly short supply throughout the country.

A related problem is the difficulty of far-advanced planning, staffing for, and scheduling these supporting services in the face of rapidly changing research emphases with consequent rapid changes in the kinds of patients needed and extreme variability in the hospital services they will require.

Although these problems are far from being fully solved, real progress can be reported toward the goal of maximum utilization of the Clinical Center.

By July 8, 1957, all 516 beds had become available for use in the clinical research teams. Bed days had advanced from 53,200 in 1954 to 170,500 in 1957, and patients admitted for the same years had increased from 1,050 to 2,595. Diagnostic screening and research followup visits by patients on an outpatient basis increased from 3,840 in 1954 to 21,340 in 1957.

A development of interest is the emphasis being placed on study of disease states in children. Here again, the specialized resources of the Clinical Center, their flexibility and scope have made possible much needed work in an area of great importance. The Clinical Center on an average day will have 60 or more infants and children being studied in the various Institute programs. So important has this become to cancer research that a special pediatric unit for-

studies in leukemia has recently been turned over by the Clinical Center to the National Cancer Institute.

Another important, virtually unanticipated development deserving mention has been the success of the program for recruiting and studying normal, healthy persons who volunteer for this purpose. Herein lies the opportunity for much of the basic research needed to underlie important medical advances of 10 or 20 years from now. The Clinical Center appears to be an ideal place for such studies and has succeeded in recruiting 250 volunteer patients who have provided 22,650 patient-days since January 1954.

Most of our volunteers have come to us from service organizations of the Mennonite and Brethren churches. These hearings are an appropriate place for a richly deserved tribute to these two organizations and to the young men and women who have undergone pain, discomfort, boredom—have foregone the ordinary pursuits of healthy young people—in order to contribute something that will benefit all mankind forever.

Senator HILL. Is there anything else that you would like to add, Dr. Van Slyke?

APPROPRIATION ESTIMATE

General Research and Services, National Institutes of Health

[National Institutes of Health, general research and services:] For the activities of the National Institutes of Health, not otherwise provided for, including research fellowships and grants for research projects and training grants pursuant to section 301 of the Act; regulation and preparation of biologic products, and conduct of research related thereto; [purchase of not to exceed eight passenger motor vehicles for replacement only; not to exceed $2,500 for entertainment of visiting scientists when specifically approved by the Surgeon General; erection of temporary structures;] and grants of therapeutic and chemical substances for demonstrations and research; [$14,026,000] *$17,742,000: Provided, That funds advanced to the National Institutes of Health management fund from appropriations included in this Act shall be available for purchase of not to exceed nineteen passenger motor vehicles, of which fourteen shall be for replacement only; not to exceed $2,500 for entertainment of visiting scientists when specifically approved by the Surgeon General; and erection of temporary structures.*

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate	$14,026,000	$17,742,000	$17,742,000
Additions: Comparative transfers from other accounts	3,224,000	0	0
Total obligations	17,250,000	17,742,000	17,742,000

Obligations by activities

Description	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Grants:						
(a) Research projects		$9,468,000		$9,468,000		$9,468,000
(b) Research fellowships		2,260,000		2,760,000		2,760,000
(c) Training		2,962,000		2,962,000		2,962,000
2. Direct operations:						
(a) Biologics standards	205	2,105,000	205	2,105,000	205	2,105,000
(b) Review and approval of grants	66	455,000	66	447,000	66	447,000
Total obligations	271	17,250,000	271	17,742,000	271	17,742,000

Obligations by objects

Object classification	1958 appropriation	1959 budget estimate	1959 House allowance
Total number of permanent positions	271	271	271
Full-time equivalent of all other positions	9	8	8
Average number of all employees	250	260	260
Number of employees at end of year	319	319	319
01 Personal services	$1,378,100	$1,433,600	$1,433,600
02 Travel	65,600	69,600	69,600
03 Transportation of things	12,900	8,900	8,900
04 Communication services	19,700	20,700	20,700
05 Rents and utility services	7,700	0	0
06 Printing and reproduction	8,300	8,800	8,800
07 Other contractual services	14,500	17,500	17,500
Reimbursement to "National Institutes of Health management fund, Public Health Service"	495,000	495,000	495,000
08 Supplies and materials	440,500	382,400	382,400
09 Equipment	55,400	48,400	48,400
11 Grants, subsidies, and contributions	14,677,000	15,177,000	15,177,000
Contribution to retirement fund	72,500	77,300	77,300
13 Refunds, awards, and indemnities	400	400	400
15 Taxes and assessments	3,400	3,400	3,400
Subtotal	17,251,000	17,743,000	17,743,000
Deduct quarters and subsistence charges	1,000	1,000	1,000
Total obligations	17,250,000	17,742,000	17,742,000

Summary of changes

	Positions	Amount
1958 actual appropriation	271	$14,026,000
Transfers: Comparative transfer from other accounts		+3,224,000
Adjusted 1958 appropriation	271	17,250,000
Deduct nonrecruiting costs: Rental costs to be absorbed by GSA		−8,000
1959 base	271	17,242,000
1959 appropriation request	271	17,742,000
Net change requested	0	+500,000

	1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount
Decreases:				
Reduction in new research projects to absorb indirect costs		$657,700		
Reduction in miscellaneous objects to absorb costs of annualization of retirement contributions		4,800		$4,800
Reduction in miscellaneous objects to absorb costs of annualization of 1958 program base positions		64,000		64,000
Reduction in employment to absorb costs of scientists and engineers pay adjustment		[1] 1,000		[1] 1,000
Subtotal decreases		727,500		69,800
Increases:				
For mandatory items:				
Retirement contributions: Annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)		2,200		2,200
Annualization of 1958 program base positions		66,600		66,600
Pay adjustment costs for scientists and engineers		[1] 1,000		[1] 1,000
Subtotal mandatory increases		69,800		69,800
For program items:				
Amount necessary to support full indirect costs		657,700		
Senior research fellowship program		500,000		500,000
Subtotal program increases		1,157,700		500,000
Total change requested		500,000		500,000

[1] Scientists-engineer pay adjustment is not reflected in the 1959 President's budget, but is included here since it is a mandatory item.

Dr. VAN SLYKE. Are we going to discuss General Research and Services and the Division of Research Grants?

Senator HILL. Yes. Do you have a statement on that now, Doctor?

Dr. SHANNON. There is a statement I can submit for the record, which I would like to do.

Senator HILL. All right. It will be put into the record at this point.

(The statement referred to follows:)

STATEMENT OF DIRECTOR NATIONAL INSTITUTES OF HEALTH ON GENERAL RESEARCH AND SERVICES

I should like to turn now very briefly, Mr. Chairman, to the appropriation item "General research and services, NIH" and to certain operations which are carried out at Bethesda under reimbursements from the several Institutes.

This appropriation item carries funds for two programs—that of the Division of Biologics Standards, and that of the Division of Research Grants.

With the permission of the committee, background statements on the work of these two Divisions are being submitted as supplements to prepared testimony. The salient points of these statements can be quickly summarized.

The Division of Biologics Standards carries with in an appropriation request of $2.1 million, the same as the fiscal year 1958 appropriation. This Division carries out an essential control function of the Federal Government, assuring the safety and potency of biologics. This operation has proceeded smoothly during the past year, taking the Asian influenza vaccine problem in stride and continuing to cope with unresolved problems related to polio vaccine. The Division has demonstrated competence both in its regulatory function and in its research program. A primary need has been quite recently satisfied in that we now have permission to proceed to build a permanent laboratory facility at Bethesda. As the committee knows, the Division presently is occupying space on loan from a number of the Institutes, to the detriment of its own program as well as theirs. The new facilities now going into construction will permit the Division not only to stay on top of, but ahead of the problems posed by such developments in the fields as vaccines for upper respiratory illness, mumps, measles, and other new products which will enter the biologics control field.

The Division of Research Grants shows in the materials before you as requesting an apparent increase of $3.7 million, from $11.9 million in 1958 to $15.6 million in 1959. I say apparent because the bulk of that increase ($3.2 million) represents funds that were transferred from the institutes during 1958 to permit central administration and development of certain training actvities in the basic sciences—such as pathology, pharmacology, biochemistry, and physiology. The 1959 appropriation request places funds for this training activity in the Division of Research Grants base, and reduces the training activities of the institutes by a corresponding amount. In addition, this Division continues to sustain through research grants a sizable part of our total investment in those fundamental or basic aspects of the biological sciences which are outside of the areas of interest of the several institutes. It also supports a number of established and a few experimental programs in the support of research training.

OTHER CENTRAL ACTIVITIES FINANCED BY REIMBURSEMENT

Two other divisions—the Division of Business Operations and the Division of Research Services—provide, for the sake of economy and efficiency, certain supporting services on a centralized basis. These services are equivalent to a number of small businesses conducted by our organization because of their essential integration with the substance of research. They are projected at essentially the same levels for 1959 as obtains for 1958. Activities in these service areas are under continuing scrutiny to devise more efficient and effective ways to provide service. Also under serious review are ways and means for modification of financing of these services under the management fund, which was set up last year to provide a system for equitable charges for services to the institute programs. Hopefully this study will progress to a point of reporting by the time of our hearings next year.

The last of these central divisions, in organizational terms, is the Clinical Center. We are now entering upon the fifth year of occupancy of this facility designed to foster the gradual development of clinical investigations closely integrated with laboratory studies in each of the seven institutes. Although shortage of highly skilled professional and technical workers for patient care and diagnostic services is a somewhat lesser problem, we are only beginning to understand the difficulty of far advanced planning for these supporting services in the face of rapidly changing research needs. Nonetheless, there is ample evidence that this unique facility is effectively serving to advance the research objectives of the institute programs. Full utilization of the Clinical Center resources is near at hand. This has been a gradual process. When 1954 is compared with 1957, the progress in utilization of the facility becomes apparent. Bed days increased from 53,000 to 170,000. Patient admissions rose from 1,000 to 2,500. Diagnostic screening and research followup visits by patients on an outpatient basis increased from 3,800 to 21,300. The Congress had a primary role in fostering the construction and operation of the Clinical Center as part of our research operation at Bethesda. It has good reason to be proud of the contributions that have been and are being made because of the research opportunities the Clinical Center provides.

I would like to comment on one further aspect of our central operations.

Until recently, we have carried out a small analytical function within the Office of Research Planning. This office has been provided with additional resources in order to extend its analytical studies to include more precise analyses of the support of research in biology and medicine from diverse sources, both public and private. Coupled with this has been an extension of analytical and evaluative functions in the Division of Research Grants and within the several Institutes. The combined product of these analyses will serve as a ready point of reference for program review and program planning. These functions have assumed considerable importance as our programs of research grant and training support have developed into a position of significance to the entire national research effort. The analytical program will be in full swing by the end of the present fiscal year, being presently (for the most part) in the stage of organization and definition of mission.

SUMMARY

You have before you, Mr. Chairman and members of the committee, 9 appropriation requests totaling $241 million.

Together, they constitute a vitally important segment of the total national research effort in the biological sciences.

I should like to conclude my remarks with a word about the place of biology in the totality of science.

The concept of the biological sciences continues to broaden. New knowledge and new techniques permit the investigator to probe deeper and deeper into the mysteries of life at the molecular and submolecular levels. At the other end of the scale, the investigative team may probe the equally mysterious challenges that are inherent in the study of man and his relation to other men and to the complex environment in which men dwell.

As the scope of the biological sciences has broadened, the number of scientific disciplines engaged in biological investigations has increased. Just as the past decade has seen significant contributions by the chemist to the life sciences, for example, so the years ahead offer dramatic promise of contributions of equal or perhaps even greater significance by the physical scientist and the mathematician. This further evidence of the essential unity of science comes at a time when science has been accorded new prominence on the national and international scene. We are deeply concerned, and quite properly so, with such current issues as scientific careers, science education, science and international good will, science and public policy, the substance of science, and the support of science.

It is my hope that as this emphasis on science takes shape and focus, nothing will be done as an expedient that does damage to the sound and very fundamental processes of science today. My particular concern is that the unity of science be strengthened, that there be no wedges driven between science and society, science education and total education, between the physical sciences and the biological sciences, between basic science and that part of science which seeks application in practice.

It is my belief, and I am confident this is reflected in the programs of the Institutes, that science will advance effectively only if the unity of science, and

the inseparable links between education and research are in practice major guides to national science policy.

EFFECT OF HOUSE ACTION

The President's budget for all appropriations of the National Institutes of Health, which you have before you, provides for an increase in overhead allowances for research grant projects from 15 to 25 percent. This subject is discussed here rather than by each Institute, because the policy question involved is identical among the Institutes. The appropriation bill, as passed by the House of Representatives (title II: General Provisions, section 207) specifically prohibits this increase. It is our feeling that this action will have an adverse influence upon the long-range fiscal stability of medical and dental schools and universities. We, therefore, ask that the payment of increased overhead allowances be allowed.

Approximately the present level of research support in all areas can be maintained while allowing full indirect costs if the increase of $8,200,000 allowed by the House is redistributed for this purpose rather than for the purpose indicated in the committee report.

The following proposed redistribution of the House increases would accomplish this purpose.

Appropriation	House increase	Revised distribution
General research and services	0	$796,000
National Cancer Institute	$1,500,000	1,779,000
Mental health activities	2,700,000	1,000,000
National Heart Institute	1,500,000	1,632,000
Dental health activities	250,000	238,000
Arthritis and metabolic disease activities	500,000	943,000
Allergy and infectious disease activities	500,000	902,000
Neurology and blindness activities	1,250,000	910,000
Total	8,200,000	8,200,000

The House of Representatives also included $3,700,000 in the appropriation bill for construction and equipment of a dental-research building as authorized by Public Law 755, 80th Congress, as amended, to remain available until June 30, 1960.

Division of Research Grants

INTRODUCTION

The Division of Research Grants has administrative responsibility for the coordination and the management of the research grants and fellowship programs of the NIH and serves as a focal point of coordination and administrative assistance for the training grants programs of the several Institutes. Through the action of 27 study sections and of several ad hoc committees, the Division provides technical advice on applications for grants so that specific recommendations for action may be made to the 9 National Advisory Councils.

The growth and expansion of the Institutes' extramural research and training programs over the past decade reflects the intent of Congress to broaden and accelerate medical research as well as to increase scientific manpower. From 1946 through 1957, the Public Health Service, through the National Institutes of Health, provided continuously increasing research grant assistance. In fiscal year 1957 support was provided to 6,186 non-Government scientists in 572 research institutions and universities. During the period 1946–57, it also provided 8,000 research fellowships for research training in 338 institutions here and abroad. Through the training-grant support, approximately 11,000 man-years of training were provided to younger scientists preparing themselves for specialized academic and professional careers. Grants for the construction of health-research facilities in 150 institutions have been awarded in order to aid these institutions in increasing markedly the amount of space available for research in the medical schools and teaching hospitals of our country.

Grants for research

An important function of the Division of Research Grants is to support a significant volume of research, principally in the basic biological and related sciences not falling within the responsibility of the categorical institutes. It is the intent of the Division of Research Grants to bring as much as possible of this fundamental work to a point where its application to a specific problem can be made. This support must be continued and strengthened in order to achieve sustained productivity and to provide the stimulating environment in which scientific "breakthroughs" may be expected to occur.

A good example of how fundamental research has led to important clinical findings is reflected in a project supported by the division. It was initiated by a grantee of the St. Louis University School of Medicine, Dr. Alrick Hertzman, professor of physiology, who, as his work turned into practical areas, received thereafter categorical institute support. His project was originally concerned with the development of methods for measuring circulatory changes in the extremities of animals and man. Experiments on animals revealed that surgical interruption of major sympathetic nerve trunks at their point of branching from the spinal cord often failed to eliminate all sympathetic nerve activity in the region supplied by that nerve trunk. These observations led to a reexamination of the anatomy of the spinal cord and its branches in conjunction with physiological studies of the terminal distribution of the nerves in question. Subsequent findings were at variance with the textbook picture. These were manifest in marked variations from one segment of the spine to another, resulting from the frequent separation of one or more fibers from a sympathetic trunk at levels above or below the main point of branching from the spinal cord.

Sympathectomy, surgical cutting of the branch of the sympathetic nerveous system, would obviously fail to interrupt these nerve impulses from small abnormally placed fibers which now served as alternate routes for impulses which the operation was intended to eliminate.

These findings accounted in anatomical terms for the therapeutic failures and relapses which many surgeons had encountered in the treatment of hypertension by sympathectomy and which also served to divert research attention away from surgery toward the field of chemical sympathectomy. The term "chemical sympathectomy" refers to the use of certain hypotensive drugs which block certain nerve paths involved in the maintenance of high-blood pressure. Hypotensive drugs (or autonomic ganlionic blocking agents) have now very largely replaced surgery in the management of this disease.

Recognition of this aspect of basic neuroanatomy has also made it possible to relieve intractable pain in certain patients by a second operation aimed at those fibers which lie outside of the primary nerve tract. In retrospect, this clinical application seems far removed from the original basic research which was conducted without reference to any particular disease. It is, however, only one of many instances where fundamental research, supported through the Division of Research Grants, has provided the necessary clues and stimulus to other research of clinical significance.

Training grants

Training grants are intended to augment the Nation's supply of qualified scientific investigators by assisting in the establishment, expansion, and improvement of training programs in universities and other research institutions and in the support of trainees therein. Aid to the institution is provided by the following types of research training grants:

1. *Experimental training grants.*—The experimental training grants program, initiated in fiscal year 1957 and continued in 1958, will continue in 1959 at the $500,000 level. The program permitted 8 leading medical schools in 1957, and an additional 6 schools in 1958, to test various means of identifying gifted medical students and thereafter giving them special research training while they are still in medical school. It is expected, upon their graduation, that they will provide a valuable pool of research-oriented physicians who will be eligible to undertake full-time academic careers without the necessity of taking additional formal research training.

2. *Basic research training grants program.*—Of special importance is the basic science training grants program, responsibility for which has been assigned to the Division of Research Grants. This program is specifically designed to support the basic science training functions in the training institutions, and to provide additional urgently needed research-trained personnel in such major

shortage areas as pathology, pharmacology, genetics, anesthesiology, epidemiology, biometry, biochemistry, physiology, and other fields of the health related sciences. This training program will act as a feeder for the categorical institute training programs, thereby serving strongly to increase their effectiveness within their special areas of primary responsibility. Grantee institutions receiving funds under the program will select and appoint individuals for predoctoral and postdoctoral training.

3. *Epidemiology and biometry training grants.*—The number of training programs in epidemiology and biometry has increased markedly until at the present time there are 31 programs in these fields, representing well over a million dollars annual investment. Of the 31 programs, 15 fall in biometry. The importance of these biometry training grants can hardly be overemphasized at this time of national need for mathematicians and biostatisticians. Nearly every graduate school in our country has one or more unfilled professorial positions available in the area of biometry.

Research fellowships

The research fellowships program presently has five major areas of interest:

1. The research training of regular predoctoral and postdoctoral candidates for research careers.
2. The support of scientists in the basic preclinical sciences through senior research fellowships.
3. The introduction of brilliant, highly motivated medical and dental students to research through the device of part-time student fellowships.
4. The provision of opportunity for full-time research training for at least 1 year to outstanding medical and dental students who may elect temporarily to delay their formal professional training.
5. Postdoctoral research fellowship support to citizens of the British Isles or Western Europe for advanced research training of at least 1 year with distinguished scientists in our country.

Regular research fellowships

These awards are made generally in the fundamental fields of the biological sciences, such as anatomy, biochemistry, and physiology. Predoctoral awards usually result in the holder's receiving a doctoral degree in science; some of the postdoctoral candidates may also receive a second doctoral degree in one of the basic sciences. In fiscal year 1957, 83 regular fellowships were awarded, 69 are being awarded in 1958, and the program will continue at approximately the same level in 1959.

Senior research fellowships

The senior research fellowship program is helping to relieve the shortage of academic leaders in such fields as anatomy, behavioral sciences, biochemistry, biophysics, genetics, microbiology, pathology, pharmacology, and physiology. Now in its second year, these research fellowships are helping to stabilize support for 92 highly promising scientists. These awards function as an effective deterrent in preventing competent investigators in fundamental areas from moving into the more highly remunerative clinical fields. Since the funds to support a senior research fellow must be entirely additive to the university department's budget, each award frees the time of a teacher for research, with the result that the department has two professional staff people engaged in research and teaching for each award made.

Approximately 50 additional senior research fellowships will be awarded each year through the fifth year, at which time the program is expected to level off with annual support thereafter of approximately 250 additional research and teaching positions in the preclinical sciences.

Postsophomore research fellowships

Through these grants, superior medical and dental students have an opportunity to obtain research training prior to completion of their professional degrees. In general, these fellowships are awarded to candidates at their natural break between their preclinical and clinical course work. This program provides full-time research training support for 1 to 3 years. In 1958, a total of 165 postsophomore fellowships were awarded and the program will continue at the same level in 1959.

Fellowships for scientists in other countries

Considerable progress has been made in the development of plans reported to Congress last year for the awarding of a limited number of postdoctoral research fellowships to outstanding medical research scientists in Western Europe.

Through the able assistance of Dr. John R. Paul, professor of preventive medicine, Yale University, the National Institutes of Health has completed arrangements with appropriate national research bodies in 12 western European countries for collaboration in this program, including the initial screening and transmittal of applications. These national research bodies are:

Germany: Forschungs Gemeinschaft der Deutschen Wissenschaft
France: Cultural Relations Committee on Foreign Affairs
Switzerland: Fonds National Suisse de la Recherche Scientifique
Italy: Consiglio Nationale delle Richerche
Austria: Austrian Academy of Science
Finland: Academy of Finland
England: British Medical Research Council
Norway: Norwegian Research Council for Science and Humanities
Denmark: Universities Joint Committee
Holland: National Health Research Council
Sweden: Swedish Medical Research Council
Belgium: Foundation Universitaire

A total of 14 applications are already under review and 25 to 30 additional ones will be reviewed. Only those applications endorsed by the national research organizations will be considered. From such applications, 12 awards will be made in 1958. In 1959 the program is expected to continue at approximately the same level.

Recipients of these fellowships are encouraged to spend a short time at the National Institutes of Health in order to be acquainted with our facilities and give us advantage of their technical competence. Their principal training will for the most part be received from an outstanding American scientist in an appropriate research institution. It is expected that these awards will benefit both the European and United States scientists through the mutual exchange of methods and ideas.

Recipients are required to return to their home country upon the completion of their period of training.

Effectiveness of research fellowship training

Dramatic evidence of the effectiveness of the Public Health Service research fellowship program has recently been provided in a study of the current interest and activities of research fellows who completed training between 1946 and 1956. Of these former research fellows, 86.5 percent reported that they are currently engaged in research in universities, medical schools, hospitals, or in publicly supported research institutions. A further analysis of the data in this study reveals that more than half of these individuals also combined teaching activities with research.

Division of Biologics Standards

BACKGROUND

The Federal Government's responsibility for the control of biological products began on July 1, 1902, with the passage by the Congress of an act to regulate the sale in interstate commerce of all viruses, serums, toxins, and analogous products applicable to the prevention and cure of diseases of man. The statute, now included in the Public Health Service Act, is basically the same as in 1902, when the technical responsibilities of the biologics program were assigned to the National Institutes of Health, then known as the Hygienic Laboratory. In 1937, the Laboratory of Biologics Control was created within the National Institutes of Health, and in 1948 it was made a part of ehe National Microbiological Institute. In June 1955, authority was granted the Surgeon General by the Secretary of the Department of Health, Education, and Welfare to expand the biologics control function of the Public Health Service to the status of a separate division within the National Institutes of Health, called the Division of Biologics Standards.

GENERAL MISSION

The Division of Biologics Standards is responsible for administering the provisions of the Public Health Service Act and regulations pertaining to the production of all biologic products—vaccines, serums, toxins, antitoxins, and analogous products, including human blood and its derivatives—offered for sale, barter, or exchange in interstate commerce.

Close surveillance of production and constant improvement in quality of these products is essential, since many of them are derived from living organisms such as bacteria and viruses, and all, by their nature, are potentially dangerous if improperly prepared and tested.

The development of realistic standards for these products and the exercise of proper control over them can be effective only if backed by an active research program of sufficient flexibility to provide information as it is needed for the formulation of such standards. One of the specific aims of the Division since its creation has been the development of a strong research program based on the premise that the control of biological products can only be successful when supported by such a program.

Through the use of biologic products, such infectious diseases as smallpox, diptheria, typhoid, yellow fever, tetanus, rabies, and poliomyelitis can now be prevented or treated. Success achieved in these and similar areas, however, does not mean that vigilance in control can be lessened.

Much work remains to be done in controlling other infectious and related diseases, such as influenza, measles, mumps, tuberculosis, hepatitis, and various allergies. Experience with poliomyelitis vaccine during the past few years and the renewed interest in influenza vaccine during the past year indicates that the development of new biological products or the modification of those already established for use in the prevention of these diseases may be extremely rapid.

The Division, because of the nature of the products with which it is concerned, performs a great deal of cooperative research with other components of the Public Health Service, members of the biological products industry, state laboratories, the Pan American Sanitary Bureau, and in the development of international biological standards with the World Health Organization.

In addition to its other functions, the Division operates the blood bank in the National Institutes of Health Clinical Center.

Control program

The control program discharges the Division's licensing responsibilities under the biological control provisions of the Public Health Service Act. This act requires that all products coming within the term "biological products" be licensed as a means of ensuring their safety, purity, and potency. This includes licensing of manufacturing establishments as well as individual products manufactured. The Division determines the eligiblity of establishments and of individual products for licenses on the basis of a review of the physical facilities for both the manufacture and testing of products, the scientific and professional qualifications of personnel, and the evidence of continued safety, purity, and potency of products under consideration.

The Division inspects each licensed establishment annually and maintains constant liaison with manufacturers of biologicals through frequent conferences. It conducts tests in its own laboratories in order to supplement or corroborate data submitted by manufacturers. In addition, it establishes and distributes physical standards used in both the production and testing of biologicals.

Programs relating to two specific products, influenza vaccine and poliomyelitis vaccine, which have been of unusual interest during the past year because of their activity and their requirements for the interdigitation of control and research may be cited as illustrative of the problems which can be expected to face the Division of Biologics Standards from time to time.

Asian strain influenza vaccine program

The Asian strain influenza program, which assumed national importance in 1957, involves both the control and the research potentials of the Division and illustrates the type of emergency which the Division must be prepared to meet. While influenza vaccine is not a new product and additional strains have been added to the vaccine during the past 12 years, the situation confronting the Division and the manufacturers in the summer of 1957 differed from earlier ones. This situation involved a production goal of tremendous size complicated by an extremely limited time factor. Sample strains of the virus causing the epidemic

in the Far East were furnished the manufacturers of influenza vaccine on May 22 by the Division and were immediately placed under intensive study in order to determine the feasibility of the immediate, large-scale production of an effective vaccine. In the interest of expediency, potency testing procedures were modified, and the manufacturers, working on a round-the-clock schedule, were able to market an effective monovalent vaccine on August 12—less than 3 months after samples of the new strain had been received. During the first 4 months of production, the Division tested and cleared for release 321 individual lots of influenza vaccine.

Through the use of ad hoc advisory groups and the continuous close cooperation with the technical staffs of the manufacturers, as well as other experts in the field, numerous technical problems were successively overcome and by mid-December of 1957 over 61 million doses of Asian strain vaccine had been produced.

Concurrently with this greatly expanded testing program, research was carried out on the development of new reference standards and improved testing procedures. These studies were designed with two objectives in mind. The first, and most pressing, was maximum production of a monovalent vaccine in the shortest possible time in order to meet immediate needs. The long-range goal was the production of a polyvalent vaccine containing the new strain in sufficient quantity to ensure adequate protection, and the concurrent development of standard safety and potency tests covering all components of such a vaccine. By December 1957 the first of such polyvalent vaccines was in production.

While the immediate problems involving influenza vaccine and the Asian strain of virus will be solved prior to 1959, a continuing influenza program must be maintained by the Division in order to meet future emergency situations which may result from the seeding of the new virus throughout the general population.

The ability of the Division to meet this recent emergency without increase in funds or personnel emphasizes the importance of maintaining organizational and program flexibility.

Poliomyelitis vaccine program

During the first 11 months of 1957 the testing of poliomyelitis vaccine continued to represent a major activity of the Division. One hundred and seventy-five lots of vaccine were tested for safety in monkeys and in tissue culture, while potency determinations were performed on 33 lots in monkeys and 66 lots in chickens. By November 1957 the production and testing of poliomyelitis vaccine had reached the stage where "double testing" could be modified in favor of the procedure of testing individual lots of vaccine only when there is an indication of the need for doing so. This, together with the expected decrease in demand for vaccine in this country, should considerably lessen the testing workload during 1959. This permits the Division, while carrying out a realistic control program for the testing of poliomyelitis vaccine comparable to that conducted for other vaccines, to implement its plans, as set forth last year, for devoting additional effort to other aspects of poliomyelitis immunization which are in need of attention; e. g., selection of more suitable virus strains, development of new cell lines for tissue culture, and study of attenuated live poliomyelitis viruses.

The Division continued to utilize the assistance of the Technical Committee on Poliomyelitis Vaccine and to maintain close cooperation with the technical representatives of industry, with attention being given to the problem areas both actual and potential. As a result, several proposed changes designed to improve the vaccine are now being considered and will probably be effected before the end of 1958.

As a result of the Division's continued effort toward devising a more satisfactory potency test for poliomyelitis vaccine, a test has now been designed utilizing chickens instead of monkeys for potency determinations. This new test not only provides more precise results, but can be performed at considerably less expense, while obviating dependence upon rhesus monkeys, the procurement of which is becoming increasingly difficult. The introduction of this test as a requirement is expected prior to 1959.

Research program

Considerable progress has been made in the research program essential to the operation of effective biologics control during the past year. The Division has had some success in its efforts to recruit key personnel. For 2 years this has been one of the most pressing problems of the Division. Several of the higher level

positions have been filled, one with an eminent virologist who will head research in the rapidly expanding field of biological products derived from viruses.

Modification of requirements for double safety testing of poliomyelitis vaccine will permit further redirection of effort toward other problems in the virus field, including the following which are already under study:

1. Procedures aimed at the in vitro assessment of the antigenic potency of vaccines have been developed. It has been found that the complement-fixing antigen content of vaccines and their antibody-combining capacity generally parallel their immunogenic potency in animals, the latter being the classical method for determining the potency of vaccines. The use of these in vitro methods may provide a rapid and relatively inexpensive method for following the effect of different steps in the manufacturing process on the potency of the final vaccine, a problem of concern to the producers.

2. Each year rhesus monkeys become increasingly difficult and more expensive to obtain. Two avenues are being explored to circumvent the necessity of using rhesus monkeys for the testing of poliomyelitis vaccine, and possibly other viral vaccines. One is the use of monkey species other than the rhesus. Studies with the African vervet monkey indicate that these animals are fully as susceptible as the rhesus and provide kidney tissue culture cells which yield equally large amounts of virus. The second is the study of continuous tissue culture cell lines which is being pursued in an effort to find lines which may prove even more sensitive to polio virus than the monkey kidney cells presently used.

It has been found that certain lines of rabbit cells may become susceptible to polio virus in the laboratory, however, the rabbit characteristics of these cells seem to disappear and the cells are then indistinguishable by present methods from those derived from other species, including man. This observation has now been confirmed in a number of laboratories. Further work is necessary to characterize such altered cells before they can be considered satisfactory for production of vaccine for human use.

3. Virus strains proposed for use in live poliomyelitis vaccine are now under study, so that satisfactory standards for production and testing of live virus vaccines may be applied in the event that such vaccines, which are experimental at present, become practical biologic products.

4. Tissue culture methods have been studied with a view to the possible production and standardization of smallpox vaccine. Results have been encouraging. Bovine, avian, rhesus monkey cells yield equivalent amounts of virus; however, of those studies, the monkey kidney cell is the most sensitive indicator of the presence of virus.

5. With the recent adaptation of measles virus to tissue culture, there is a strong possibility that a vaccine is achievable in the near future. Studies have been initiated to provide experience and information concerning the characteristics of the measles virus, with a view to the eventual development of standards and specifications for a satisfactory vaccine.

Standards for the safety, purity, and potency of vaccines for the prophylaxis of adenovirus infections were developed and promulgated this year. Samples of the vaccine, which is now on the market, are being tested for safety in tissue culture and monkeys and for potency by inoculation of various animal species.

With the constantly increasing use of blood and blood products, the Division's continuing research programs on the preservation and storage of blood assume increasing importance. Investigations are currently being conducted on the stability of normal serum albumin, effects of various chemical and physical agents on plasma, chemical characteristics and efficacy of various sterilizing filters, improved shipping containers, potency testing for diagnostic blood-grouping reagents, evaluation of various blood products used in hemorrhagic conditions, low-temperature storage of red blood cells, and the protection of donors against air embolisms and other hazards.

A project of considerable importance to the many blood banks throughout the Nation is one on the evaluation of the various sources of blood-banking errors. This long-range project, which has been carried on for approximately 1 year, is designed to factually determine the extent of the problem, the possible reasons for the errors which do occur, and the development of preventive measures.

Part of the Division's long-range program on the development of more effective immunizing agents is a study designed to determine the enhancing effect obtained when certain of these immunizing agents are combined and where adjuvants are added. The role of some of the factors involved in this phenomenon is being studied, using diphtheria and tetanus toxoids and pertussis vaccine as examples.

New DBS building

One of the main problems of the Division is the provision of adequate space in which it can efficiently conduct its functions. At present the Division is occupying space which has been renovated and altered in an effort to meet the demands of isolation of the testing of vaccines and other products from the infectious agents necessary to the research program.

Consequently, the areas occupied by the Division have encroached on research space urgently needed for programs of the other institutes. Unsatisfactory situations thus exist for the present. However, these deficiencies will be met with acquisition of a new building, final plans for which have been completed. The present schedule contemplates construction starting this spring. It is anticipated that the approximate completion date will be in the latter part of calendar year 1959, with occupancy immediately thereafter.

Future program

The Division plans to continue to place increasing emphasis on research basic to a sound control program, thus obtaining knowledge and data necessary to anticipate and meet problems and to deal with them effectively. These plans do not call for a major increase in staff in the near future, but rather reflect an effort to build into the program further flexibility which will permit such shifts in emphasis as may be required, such as occurred during the past year. The Division was able to devote a considerable amount of its resources and time to the problem of the Asian influenza vaccine emergency without requesting additional funds.

Based on these plans, the Division is not requesting any increase in funds or personnel for 1959. It will request some increases in connection with the occupancy and operation of the urgently needed new building. This request will be timed to the constructon schedule of the building.

Recent Advances in Research on Basic and General Health Problems January–March 1958

Items of interest on program developments and research studies conducted and supported by the Division of Research Grants

SYNTHETIC SMOG FOUND TO AFFECT REPRODUCTIVE ABILITY OF MICE

Division of Research Grants investigators have shown that smog, synthetically reproduced by reacting gasoline and ozone, significantly reduces the ability of mice to conceive. The finding is a significant outcome of experimental and clinical studies aimed at assessing the effect of atmospheric pollutants on health.

The possibility that air contaminants may have an adverse biological effect at the low cencentrations which regularly occur in urban areas has been a matter of serious public health concern. The present study is among the many being conducted in the Los Angeles area where the problem is aggravated by geographic, meteorologic, and industrial factors which favor high pollutant concentration.

The Division of Research Grants-supported study was initiated to select and evaluate a biological system capable of responding to low concentrations of air contaminants. In addition to finding that synthetic smog impairs the reproductive ability of mice, the investigation determined that the effect of this smog was especially severe on newborn mice, practically all of which died prior to weaning.

Scientists Paul Kotin and Marilyn Thomas report these findings in the AMA archives of industrial Health.

INDIVIDUALITY OF DRIED BLOOD DETERMINED BY PAPER ELECTROPHORESIS

Division of Research Grants grantees have demonstrated real differences in the protein pattern of dried blood of various individuals. This has been shown to be of practical significance in crime detection, since it is not always possible to identify all known blood groups in dried blood.

Paper electrophoresis is a method for the separation of charged molecules in an electric field. Larger molecules move at a slower rate and therefore travel a shorter distance than smaller molecules. The pattern of this movement is measured on paper and serves to identify the various proteins.

The results of these preliminary tests are reported by Paul L. Kirk and Charlotte L. Brown of the University of California in a recent issue of the Journal of Forensic Medicine. Samples of fresh finger blood, drawn from laboratory personnel, were deposited on slides which were dated, dried, and stored. It appears that periods approaching 1 year, standing of a dry stain have little influence on the outcome of the tests. Longer intervals of time, in some instances, weaken the pattern.

Several samples of dry blood actually involved in criminal cases were also tested. Blood from a murder victim was clearly and readily distinguished from blood of the victim's spouse. Blood of another murder victim was tested and compared with the dried blood of his convicted murderer which had been obtained at the scene of the crime. The differences between the 2 were sufficiently marked to prevent confusion of the 2 persons involved and aided in the identification of the criminal.

STUDIES IN PREGNANCY WASTAGE

Endocrinological experiments on rats have demonstrated that injections of adrenocorticotropic hormone (ACTH) reduce litter size and produce a large number of stillbirths. This is one of many Division of Research Grants-supported studies aimed to elucidate (1) the complex role that endocrine factors play in the physiology of reproduction and (2) the causal factors leading to pregnancy wastage.

Dr. Joseph T. Velardo, DRG grantee at the Yale University School of Medicine, has demonstrated that ACTH (adrenocorticotropin), administered parenterally, reduces litter size and produces a large number of stillbirths in rats. A marked decrease in litter size was observed when ACTH was injected on the day of mating and for 6 subsequent days.

The results of this study, reported in a recent issue of the American Journal of Physiology, support the contention that numerous interactions exist among the hormones of the adrenal cortex and the ovaries. Furthermore, it would appear that a precise ration must exist between hormones of the adrenal cortex and those of the ovaries to bring about successful gestation in laboratory animals. It is hoped that future investigation will clarify the mechanisms involved in adrenal-gonadal interrelations and provide important clues to the many-faceted problem of pregnancy wastage.

ALLERGIC NATURE OF GRANULOMAS DEMONSTRATED

Two dermatologists, Drs. Walter B. Shelley and Harry J. Hurley of the University of Pennsylvania, have demonstrated both experimentally and clinically that granulomas (tumorlike cell masses) can be caused by an allergy. Their work was prompted by the finding that deodorants containing the metallic element zirconium caused granulomas to form on the skin.

Granuloma formation is considered one of the significant reaction patterns of the body in disease. It is involved in the basic body changes in such chronic diseases as tuberculosis, leprosy, and syphilis. Granulomas are made up of closely packed epitheloid cells of reticulo-endothelial origin. Other than this, little concerning their origin is known.

In this DRG-supported study reported in a recent issue of Nature, healthy volunteers were given injections of an aqueous solution of sodium zirconium lactate in and under the skin to build up sensitivity. Six months later, one of the test subjects suddenly developed large masses at the site of all the early injections. The reaction was found to be due to a state of allergic hypersensitivity to zirconium.

Additional proof of the allergic basis for the granulomas came from tests on six patients who had developed the masses from zirconium deodorants. They were injected with dilute solutions of the zirconium compound, and in all cases granulomas formed at the site of injection. Control subjects showed neither clinical nor histologic response to these injections.

Further research should tell which of the granulomas found in disease are allergic and which are nonallergic, the authors conclude. It should be noted that this work has added significance because many of the recently marketed poison ivy medications containing zirconium.

FURTHER FRACTIONIZATION OF A PITUITARY GLAND HORMONE

Drs. Chom Hao Li and Phil G. Squire of the University of California have found in the course of their work with interstitial cell stimulating hormone (ICSH) that more than one protein component in an extract from sheep pituitary glands possesses ICSH activity. Interstitial cells are a nongerminal component of the testis. They are known to secrete the male hormone that gives rise to secondary sex characteristics and behavior.

The investigators' report in the journal Science is devoted to a biophysical study of one of these components, B–ICSH. Its interstitial cell stimulating activity was estimated by its ability to increase the weight of the ventral prostate in rats from which the pituitary gland has been removed.

DRG-supported studies of this kind are adding significant knowledge to the understanding of some of the specific factors involved in sterility in man and may lead to superior therapy for certain testicular deficiencies.

NEW THEORY EXPLAINS COMPOSITION AND OSMOTIC STRENGTH OF GASTRIC JUICE

DRG grantees strengthen their previously held theory about the stomach's production of hydrochloric acid. This theory postulates that both electrical and chemical forces are involved in the production of the constituents of gastric juice.

Dr. Warren S. Rehm, of the University of Louisville, Ky., previously developed a theory about the gastric production of hydrochloric acid. This stated that (1) there is "active transport" (i. e., by chemical means and not by physical forces such as simple diffusion) of the negative chloride ion in the stomach; (2) this transporting mechanism gives rise to electromotive forces; and (3) the flow of current thus created controls the liberation of hydrogen ions. In the present study reported in a recent issue of the American Journal of Physiology, the DRG grantee and his coworkers, Warren H. Dennis and William A. Brodsky, amplify this theory and attempt to fit it to known facts about the composition and osmotic strength of gastric juice.

There are a number of theories on the mechanism of gastric acid secretion and many variants of each of these. The solution of this problem is of importance in understanding the secretory process in general and, more practically, the normal and abnormal functioning of the stomach. The present theory is of interest in that it helps explain some of the variations in composition which are normally encountered as well as the basic mechanism.

PROTECTIVE ACTION OF PURIFIED BACTERIAL SUBSTANCES STUDIED

Injections of endotoxins, purified bacterial substances, exert in animals a protective action against lethal doses of certain bacteria. An effort to elucidate the mode of protective action of endotoxin was reported at the annual meeting of the Federation of American Societies for Experimental Biology, by Drs. Eli Nadel, Bobby Young, and Arthur Hilgar of the National Institutes of Health, and Dr. Adrian Mandell, of the Walter Reed Army Institute of Research.

In order to determine whether this protection arises through a "stress" reaction resulting from stimulation of the pituitary-adrenal axis, comparative studies were made of the following:

1. Ability of pretreatment with adrenocorticotropic hormone (ACTH) or endotoxin to protect animals against a lethal injection of *E. coli*.
2. Adrenocortical-stimulating property of these two agents during a 6-month period.

Following injections of ACTH, the expected rise in the urinary output of three corticosteroids was demonstrated. There was a similar rise after endotoxin injection, unexpected in view of others' reports that endotoxin depressed adrenocorticosteroid output in a perfusion system. In addition, only endotoxin elicited a protective action against a lethal dose of viable *E. coli*.

These observations indicate that the initial protective effect of endotoxin is not dependent upon the pituitary-arousing mechanism and is probably a specific effect not related to the stress or alarm reaction.

PIGMENT CELL STUDIES SUGGEST RELATIONSHIP BETWEEN PINEAL GLAND AND THE GONADS

A study of melanin pigmentation in bovine pineal glands reveals strong evidence of a pineal-gonadal interrelation.

The incidence of melanin in 880 bovine pineal glands was studied by a DRG grantee, Enrique Santamarine, of Rutgers University. The fact that castration in male cattle causes overgrowth of the pineal gland followed by a degenerative process in which melanin is involved provides some support for the concept of a pineal-gonadal relationship.

Reporting his study in the Canadian Journal of Biochemistry and Physiology, the investigator found no melanin in bulls 4 and 5 years of age nor in heifers of about 18 months. In pregnant cows over 5 years of age, melanin was found in 5.4 percent of the pineal glands. Nonpregnant cows of the same age exhibited melanin in 8.5 percent of the pineal glands. Castrated male cattle between 18 and 24 months of age showed 49.6 percent of the pineal glands with macroscopic signs of melanin. As much as 67 percent of the pineal glands of steers from some herds contained melanin.

In castrated animals, the removal of the testicles causes hypertrophy of the pineal gland. At the same time, the pituitary gland, also undergoing hypertrophy, releases melanocyte-stimulating hormone in sufficient amounts to stimulate melanin production in the pineal gland. In young animals, the pineal gland seems to be somewhat refractory to melanocyte-stimulating hormone. It appears that the process of hypertrophy produced in the pineal gland by castration exhausts the gland far more within a short period of time than the exhaustion produced in the span of life.

Concludes the investigator, "Whatever the intimate mechanism of melanin formation in castrated bovine pineal gland, this phenomenon seems to give strong evidence of a relationship between the pineal gland and the gonads."

NEW SYMPTOM COMPLEX DISCOVERED IN INFANTS

DRG investigators report a new syndrome observed in infants with symptoms of edema, pallor, and marked irritability. Extensive studies suggest that the symptom complex is related to an abnormality in protein metabolism at the cellular level.

Investigations by Drs. Robert A. Ulstrom, Nathan J. Smith, Ernest M. Heimlich, and Kazuko Nakamura at the University of California reveal that the symptom complex is due to an abnormal decrease in the amount of blood protein and a transitory anemia. Followup tests with radioactive amino acids indicate that the hypoproteinemia resulted from a relative failure in the utilization of amino acids in addition to a rapid degradation of plasma proteins. A study of the dietary intakes preceding and during the development of the anemia and hypoproteinemia shows that the disturbance is not related to a deficiency of some essential protein component in the diet of the afflicted children.

The underlying cause of this disorder remains unknown at the present time. It is the investigators' opinion, however, that the syndrome is the result of an endogenous or conditioned derangement of protein metabolism. Further investigation of the molecular structure of the serum proteins as well as the factors influencing protein metabolism is recommended to establish the basic reason for the rapid degradation rate of proteins in these children.

The studies have been reported in the American Medical Association Journal of Diseases of Children.

TRANSITION OF AMINO ACIDS TO PROTEINS AND OTHER MACROMOLECULES

DRG grantees have postulated the steps involved in the transition of amino acids to proteins, nucleic acids, and polysaccharides. Their present studies, together with other known experimental evidence, are helping to provide clues as to the origin, structure, and biosynthesis of these macromolecules.

DRG Grantees, Sidney Fox, Allen Begotsky, Kaoru Harada, and Peter D. Hoagland, of Florida State University, are providing evidence from which Darwinian evolution can be extrapolated at the molecular level. Their work is directed to the search for a "primordial" protein and the mechanism of its production.

As reported in the Annals of the New York Academy of Sciences, the studies are designed to simulate spontaneous generation of protein and nucleic acid. By simulating terrestrial temperatures believed to exist at the dawn of life, the investigators were able to produce a variety of amino acids, the building blocks of protein, from a few selected biochemical staples.

Their findings reveal a pattern of formation that parallels the biochemical changes that take place in the "building-up" processes of the living cell. They suggest, moreover, a simultaneous generation of metabolic sequences and of protein enzyme. The presence of ureidosuccinic acid indicates a possible mechanism for "inheritance" or perpetuation of these reactions. This is inferred because ureidosuccinic acid is known to be a biochemical intermediate for gene substance. Genes are the units which control the physical characteristics and metabolic pathways of living organisms.

The practical implications of this study are evident in the analogy which may be assumed to exist between these test-tube reactions and known anabolic processes in embryonic tissue development and regeneration of tissue. In fact, new possibilities in peptide synthesis are being investigated.

Its broader biological significance is seen in the hypothesis that once spontaneous generation of protein is launched and provided with a mechanism of repetition, that subsequent development may be subject to environmental factors which lead to directional changes in a manner analogous to Darwinian evolution.

Recent Advances in Biologics Control, January to March 1958*

Items of interest on program developments and research studies conducted by the Division of Biologics Standards

DEVELOP TEST-TUBE POTENCY TEST FOR POLIO VACCINE

DBS scientists have developed an in vitro potency test for poliomyelitis vaccine, based on the observation that antibodies will combine with either virus or vaccine. This test is a valuable addition to the techniques available for testing the vaccine for antigenicity in that, since it is a test-tube technique, it is simple, economical, and reproducible from one test to the next—advantages which the animal potency tests do not share.

The test is based on the previous work of Dulbecco, Krech, and McLean, but modified to take into account Gard's recent findings on immuno-inactivation. Prolonged incubation is essential to compete the neutralization of the poliovirus by its antibody, or similarly, in the present instance, to complete the binding of the antibody by the vaccine.

The test is carried out as follows: A fixed amount of antibody is added to varying dilutions of vaccine. Vaccine-serum mixtures are incubated at 37° C. for 6 hours, then refrigerated overnight at 4° C. A fixed number of virus particles are added, incubated for an additional 6 hours at 37° C., refrigerated overnight again, and free virus is assayed by the plaque method on monkey monolayer cultures.

If the vaccine is relatively potent, the majority of the antibodies will have been bound by the vaccine prior to the addition of the virus, and little or no antibodies will be left to combine with the virus. Consequently, a high virus count indicates a vaccine of high potency and a low count indicates a vaccine of poor potency. For purposes of standardization, a reference vaccine is always tested in the same way as a basis of comparison.

It should be emphasized that since the antibody-combining test does not directly measure the ability of the vaccine to stimulate antibody production in living animals, as in monkeys and chicks, it is necessary to establish that the test, in fact, measure this ability. This is being done by a series of tests in which vaccines are assayed for potency in animals and also in comparative antibody-combining tests.

IN VITRO METHOD FOR DIFFERENTIATION OF VIRULENT AND ATTENUATED POLIOVIRUSES

A new method of distinguishing virulent from attenuated polioviruses without using live monkeys has been developed by DBS scientists Drs. Y. Kanda and J. L. Melnick.

*Prepared April 1958.

Scientists at DBS are planning to use this method of identification to determine the genetic stability in human beings of the attenuated polioviruses now being considered as candidates for a live poliovirus vaccine to be taken orally.

The growth patterns of the 3 strains of poliovirus (Mahoney, MEF, and Saukett) used in the preparation of poliomyelitis vaccine, and those of 3 attenuated strains, 1 of each serotype, have been determined in primary monkey kidney tissue culture and in a continuous stable cell line derived from monkey kindey.

It has been found that all six virus strains yield approximately the same titers in primary monkey kidney and in HeLa cultures in fluid medium; but in the continuous stable cell line, the attenuated strains and the Saukett strain yield titers as low as 0.01 percent of the values obtained with the highly virulent Mahoney and MEF strains.

REGULATIONS FOR PROCESSING WHOLE BLOOD PREPARED

During the past decade, there has been a steady increase in the use of blood and blood products. Present estimates indicate that close to 5 million pints of blood are processed annually for transfusion purposes in the United States alone. This increasing demand and the attendant increase in the number of licensed blood banks has emphasized the need for detailed regulatory specifications for processing and distributing this vital commodity. The first set of specific regulations for a blood product, standards for the processing of human whole blood, have been officially approved.

More than 200 blood banks are licensed by the Public Health Service to process and ship human whole blood and blood products in interstate commerce. Heretofore, the technical processes have been controlled by general provisions of regulations for biological products under the Public Health Service Act, implemented by more detailed specifications in the form of so-called minimum requirements prepared by DBS. These processes have now stabilized sufficiently to warrant their translation into regulations. The text of these regulations was prepared by DBS in consultation with professional personnel in the various fields relating to blood banking and blood processing, and jointly approved by the Surgeons General of the Public Health Service, Army, and Navy, as required by statute, prior to final approval by the Secretary. They will provide a foundation for the future development of regulations for other blood products.

NONCATEGORICAL PROGRAMS

Dr. SHANNON. I would like to be a little more brief in this discussion and I think it may be that you will want to ask some questions.

This appropriation supports the bulk of what I would call our noncategorical programs.

By saying "noncategorical," I do not mean it does not relate to the important categories of disease, or a portion does not. Rather, it contains those functions which can be better done on a centralized basis. Some of these are noted in the statement. In the training grant area, we have experimental teaching grants which are aimed, at determining how the medical environment can be modified so as to develop planned medical research workers as a primary purpose of the medical school education. Presently they develop by accident rather than by design.

The program also contains our basic research training grant program. Here we train the biometricians, epidemiologists, biochemists, physiologists, pathologists, who are essential for all of our categorical programs—cancer, heart, mental health, and the like. Research fellows are at the stage of their development where it is profitable for them to be specifically oriented to a specific disease item. It is far better, at least in certain of these, that they be given a broad orientation prior to focusing it down to a narrow area.

TYPES OF FELLOWSHIPS

The appropriation contains a variety of fellowships, predoctoral and postdoctoral fellowships, part-time student fellowships for medical students, to indoctrinate them early toward a research career; postsophomore fellowships, to permit the medical student who drops out of medical school for a year to obtain this training.

Dr. VAN SLYKE. That is postsophomore fellowship program.

Dr. SHANNON. Yes. This permits the potential investigator to obtain a year's solid experience before he completes his medical training. Later he can be picked up on the postdoctoral fellowships.

The fellowship program, apart from attempting senior development of a professorial type of a limited number of individuals, is aimed as a recruitment device for the young scientist, as a means of helping him obtain his primary professional training in research and introducing him to research on a postdoctoral basis. The latter provides such additional training as will permit him to make progress in whatever categorical area he selects. I could go on in the training program at great length, but I think these few words are enough.

Now, this appropriation also conducts a research grant operation that is truly supportive of those areas of science which, while being essential for categorical research, cannot be conveniently grouped under "Heart" or under "Cancer," or under "Mental health."

This central operation has been the actual spawning ground that has permitted the development of many of our categorical programs. It contains perhaps the most important single group of research grant projects in our total program. Without adequate support of noncategorical research our total program would be grossly out of balance.

Senator HILL. Do they form a base?

Dr. SHANNON. Yes, sir; they are the basic central core that ties many of our categorical programs together.

FUNDS FOR CONTINUATION GRANTS

Senator HILL. What funds are required for these continuation grants this coming fiscal year?

Dr. SHANNON. This is so close to Dr. Van Slyke's day-to-day responsibilities that I wonder if you would mind, sir, if he handled it?

Senator HILL. Not at all. Dr. Van Slyke?

Dr. VAN SLYKE. $6,736,000 is required for continuation, on which there is a moral commitment. In other words, we told them if Congress appropriates money, "you can rest assured you will get support next year."

There are, in addition to those that have a moral commitment, about, as I recall the figure, sir—and I would like permission to change it, if I may—about $300,000 in research which is now being supported but which does not have a moral commitment for the future. The first figure, $6,736,000 has a moral commitment, and the second figure, $300,000, we feel the Council will recommend for continuation, since they are already supporting them, although they do not have a moral commitment now.

ESTIMATE OF NEW PROJECTS

Senator HILL. Now, how many new projects do you anticipate will be approved in the coming fiscal year?

Dr. VAN SLYKE. It is hard, Mr. Chairman, to say how many will be approved in the coming fiscal year. All I can do is to tell you that the rate has been going up year by year, and our new business this past year is $4,770,000. That is new approvals, not applications, but these applications which were recommended for payment, and which we would have paid if the funds were available. Of course, we did not have funds to pay all of the recommended ones.

Senator HILL. What would be the total amount that you would need under this Division?

Dr. VAN SLYKE. If you take the continuation support and the backlog of recommended but unpaid grants, and you keep the rate of new business the same next year as this year in paid grants, it would amount to a shade over $14 million for research.

BUDGET ALLOWANCE

Senator HILL. And the budget allowance was what?

Dr. VAN SLYKE. This is based, sir, on 15 percent indirect costs. This statement was prepared on that.

Senator HILL. It was based on what?

Dr. VAN SLYKE. Fifteen percent for the indirect costs of the present allowance.

Senator HILL. Fifteen percent overhead costs?

Dr. VAN SLYKE. Yes, sir. And it was prepared that way, sir, because of the House action in disallowing the full costs.

Senator HILL. But the total figure would be $14 million?

Dr. VAN SLYKE. Yes, sir; a shade over $14 million.

Senator HILL. Senator Smith, do you have any questions?

Senator SMITH. No.

Senator HILL. Senator Dworshak?

Senator DWORSHAK. No.

Senator HILL. Is there anything you would like to add, Dr. Shannon?

Dr. SHANNON. No, sir, except to thank you very much for your very gracious reception of us. We do appreciate coming before you each year.

Senator HILL. Is there anything you would like to add, Dr. Van Slyke?

Dr. VAN SLYKE. I certainly would like to agree with Dr. Shannon's remarks.

Senator HILL. Well, we were very happy to have had you before us, and I will also say this. I think any member of this committee who will read Dr. Shannon's statement in full, and who will also read the statement of Dr. Burney, the Surgeon General of the Public Health Service, which sets out the progress that has been made, and all that has been done by the National Institutes of Health, anyone that will do that will not only be gratified but will also be proud that this subcommittee, and that includes all of the members of the committee, have given their support to the work of the National Institutes of Health.

Dr. Burney, in your statement the other morning you presented a real picture of the operation, not only on the part of the Public Health Service as a whole, but on the part of the National Institutes of Health and your statement certainly confirms those things, Dr. Shannon.

Dr. SHANNON. Thank you very much.

Senator HILL. I think all of us on this subcommittee can be, as I said, exceedingly gratified and proud. Thank you very much.

Senator SMITH. As long as bouquets are being passed out I want to say, and I think this committee will agree, that we are very fortunate to have had the chairman which we have had through the years. He has given us all the courage to go ahead and work on this.

Senator HILL. Thank you, Senator Smith. You are most generous. Thank you very much.

Are there any other questions, Senator Dworshak?

Senator DWORSHAK. No.

Senator HILL. If not, the committee will stand in recess until 10 o'clock, Tuesday morning.

(Whereupon, at 12:30 p. m., Thursday, April 17, 1958, the subcommittee recessed until 10 o'clock a. m., on Tuesday, April 22, 1958.)

LABOR—HEALTH, EDUCATION, AND WELFARE APPROPRIATIONS FOR 1959

TUESDAY, APRIL 22, 1958

UNITED STATES SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D. C.

The subcommittee met at 10 a. m., pursuant to recess, in room F–82, the Capitol, Hon. Lister Hill (chairman of the subcommittee) presiding.

Present: Senators Hill, Stennis, and Pastore.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

PUBLIC HEALTH SERVICE

NATIONAL CANCER INSTITUTE

STATEMENT OF DR. JOHN R. HELLER, DIRECTOR, NATIONAL CANCER INSTITUTE; ACCOMPANIED BY DR. JAMES A. SHANNON, DIRECTOR, NATIONAL INSTITUTES OF HEALTH; AND JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

National Cancer Institute

[National Cancer Institute:] To enable the Surgeon General, upon the recommendations of the National Advisory Cancer Council, to make grants-in-aid for research and training projects relating to cancer; to cooperate with State health agencies, and other public and private nonprofit institutions, in the prevention, control, and eradication of cancer by providing consultative services, demonstrations, and grants-in-aid; and to contract on a cost or other basis for supplies and services by negotiation, without regard to section 3709 of the Revised Statutes, in connection with the chemotherapy program, including indemnification of contractors to the extent and subject to the limitations provided in title 10, United States Code, section 2354, except that approval and certification required thereby shall be by the Surgeon General; and to otherwise carry out the provisions of title IV, part A, of the Act; [$56,402,000] *$55,923,000.*

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate	$56,402,000	$55,923,000	$57,423,000
Deductions:			
Comparative transfer to "General research and services, National Institutes of Health, Public Health Service"	−348,000	0	0
Unobligated balance, estimated savings	−117,000	0	0
Total obligations	55,937,000	55,923,000	57,423,000

Obligations by activities

Description	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Grants:						
(a) Research projects		$21,059,000		$21,059,000		$22,077,000
(b) Research fellowships		1,027,000		1,027,000		1,027,000
(c) Training		4,550,000		4,550,000		4,550,000
(d) State control programs		2,250,000		2,250,000		2,250,000
(e) Field investigations		1,900,000		1,900,000		1,900,000
2. Direct operations:						
(a) Research	658	9,360,000	658	9,435,000	671	9,685,000
(b) Review and approval of grants	32	562,000	32	528,000	34	560,000
(c) Professional and technical assistance	412	2,724,000	412	2,644,000	412	2,644,000
(d) Chemotherapy contracts	51	12,340,000	51	12,365,000	51	12,565,000
(e) Administration	24	165,000	24	165,000	24	165,000
Total obligations	1,177	55,937,000	1,177	55,923,000	1,192	57,423,000

Obligations by objects

Object classification	1958 appropriation	1959 budget estimate	1959 House allowance
PUBLIC HEALTH SERVICE			
Total number of permanent positions	1,126	1,126	1,141
Full-time equivalent of all other positions	27	27	27
Average number of all employees	1,065	[1] 1,084	[1] 1,095
Number of employees at end of year	1,147	[1] 1,155	[1] 1,155
01 Personal services	$5,847,000	$6,004,000	$6,066,000
02 Travel	254,000	234,000	237,000
03 Transportation of things	30,000	30,000	30,000
04 Communication services	70,000	70,000	70,000
05 Rents and utilities	5,000	5,000	5,000
06 Printing and reproduction	87,700	87,700	87,700
07 Other contractual services	185,400	134,000	144,000
Research contracts	11,816,500	11,775,500	12,070,500
Reimbursements to "National Institutes of Health management fund, Public Health Service"	4,447,000	4,518,000	4,584,000
08 Supplies and materials	1,265,600	1,170,200	1,200,200
09 Equipment	477,600	426,000	442,000
11 Grants, subsidies, and contributions	30,737,000	30,737,000	31,755,000
Contribution to retirement fund	281,500	298,900	298,900
13 Refunds, awards, and indemnities	2,000	2,000	2,000
15 Taxes and assessments	17,200	17,200	17,200
Subtotal	55,523,500	55,509,500	57,009,500
Deduct quarters and subsistence charges	21,000	21,000	21,000
Total, Public Health Service	55,502,500	55,488,500	56,988,500
ALLOCATION TO VETERANS' ADMINISTRATION			
Total number of permanent positions	51	51	51
Average number of all employees	49	49	49
Number of employees at end of year	51	51	51
01 Personal services	$308,000	$308,000	$308,000
02 Travel	65,000	65,000	65,000
08 Supplies and materials	32,000	31,000	31,000
09 Equipment	6,500	6,500	6,500
11 Contribution to retirement fund	23,000	24,000	24,000
Total, Veterans' Administration	434,500	434,500	434,500
Total obligations	55,937,000	55,923,000	57,423,000

[1] Reduction in employment to absorb costs of scientist-engineer pay adjustment is not in the 1959 President's budget, but is shown here since it is a mandatory item.

Summary of changes

	Positions	Amount
1958 actual appropriation	1,177	$56,402,000
Transfers: Comparative transfer to "General research and services, NIH"		−348,000
Adjusted 1958 appropriation	1,177	56,054,000
Deduct nonrecurring costs: Estimated savings		−117,000
1959 base	1,177	55,937,000
1959 appropriation request	1,177	55,923,000
Net change requested	0	−14,000

	1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount
Decreases:				
Reduction in new research projects to absorb indirect costs		$1,465,000		
Reduction in miscellaneous objects to absorb costs of annualization of retirement contributions		18,400		$18,400
Reduction in miscellaneous objects to absorb annualization for 1958 program base		267,000		267,000
Reduction in employment to absorb costs of scientists and engineers pay adjustment		[1] 43,000		[1] 43,000
Subtotal decreases		1,793,400		328,400
Increases:				
For mandatory items:				
Retirement contributions: Annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)		15,500		15,500
Annualization costs for 1958 program base		184,900		184,900
Pay adjustment costs for scientists and engineers		[1] 43,000		[1] 43,000
Subtotal mandatory increases		243,400		243,400
For program items:				
Amount necessary to support full indirect costs		1,465,000		
Research projects including cancer virus studies				1,018,000
Research direct funds for virus and tumor cell studies, and drug development			13	200,000
Cost of increased review and approval services			2	16,000
Chemotherapy contracts				200,000
Net change in reimbursement to National Institutes of Health management fund		71,000		137,000
Subtotal program increases	0	1,536,000	15	1,571,000
Total change requested		−14,000	15	1,486,000

[1] Scientists-engineer pay adjustment is not reflected in the 1959 President's budget, but is included here since it is a mandatory item.

EFFECT OF HOUSE ACTION

Activity No. 1 (a).—Research projects

The House allowance includes an additional $1,018,000 which will be devoted to research grants, including cancer virus studies.

Activity No. 2 (a).—Research

The full amount requested of $9,435,000 and 658 positions was allowed by the House, and an increase of $250,000 and 13 positions was provided. The total of $9,685,000 is an increase of $325,000 over the 1958 appropriation. One hundred and twenty-five thousand dollars of the total program increase is for the Institute's proportionate share of services furnished centrally. The remaining $200,000 will permit expansion of work with viruses, the development of chemotherapeutic agents, and studies of tumor cells.

Activity No. 2 (b).—Review and approval of grants

The full amount requested of $528,000 and 32 positions was allowed by the House. Thirty-two thousand dollars and two positions of the House increase has been allocated to this activity to permit adequate review and approval of the

additional grants to be supported. The total of $560,000 is $2,000 less than the 1958 appropriation.

Activity No. 2 (d).—Chemotherapy contracts

The full amount requested of $12,365,000 was allowed by the House and an increase of $200,000 was provided for this activity. The total of $12,565,000 is an increase of $225,000 over the 1958 appropriation. Twenty-five thousand dollars of the total increase is for mandatory items.

Allocations of Grant-In-Aid Funds for Cancer Control

State or Territory	1957 allocations	1958 allocations	Estimated 1959 allocations
Alabama	$49,900	$50,400	$49,700
Arizona	15,600	16,100	16,500
Arkansas	34,600	33,700	33,000
California	136,700	140,400	142,300
Colorado	22,900	23,000	23,200
Connecticut	25,600	25,400	25,200
Delaware	4,200	4,400	4,500
District of Columbia	9,400	9,500	9,200
Florida	45,100	49,100	51,400
Georgia	53,300	53,300	53,200
Idaho	12,600	12,300	12,100
Illinois	111,200	109,700	109,500
Indiana	52,600	53,100	53,700
Iowa	38,600	38,400	39,200
Kansas	29,800	30,600	30,300
Kentucky	47,300	46,600	46,100
Louisiana	43,700	44,200	44,000
Maine	16,800	17,000	17,200
Maryland	30,500	31,600	31,900
Massachusetts	65,600	62,600	62,400
Michigan	81,400	82,900	84,400
Minnesota	44,600	44,600	44,900
Mississippi	43,200	41,900	42,100
Missouri	56,900	57,300	56,600
Montana	12,400	12,000	11,900
Nebraska	23,600	23,400	23,400
Nevada	6,900	6,600	6,400
New Hampshire	9,700	9,800	9,800
New Jersey	65,200	64,200	64,900
New Mexico	14,500	14,100	14,000
New York	198,700	196,900	192,600
North Carolina	61,600	62,700	62,800
North Dakota	14,200	13,800	13,400
Ohio	105,800	106,200	105,800
Oklahoma	34,400	33,900	33,900
Oregon	24,600	24,400	24,500
Pennsylvania	141,200	138,600	137,800
Rhode Island	11,000	10,700	11,100
South Carolina	35,800	36,000	36,300
South Dakota	14,700	14,500	14,300
Tennessee	52,500	52,300	51,300
Texas	106,900	108,900	109,700
Utah	14,000	13,700	13,700
Vermont	8,000	8,000	8,200
Virginia	46,700	46,100	46,800
Washington	32,200	32,800	33,400
West Virginia	29,800	29,500	29,200
Wisconsin	49,000	48,900	49,500
Wyoming	8,200	7,800	7,500
Alaska	8,400	7,900	7,400
Hawaii	6,800	7,000	7,300
Puerto Rico	40,100	39,100	38,300
Virgin Islands	1,000	1,000	1,000
Guam	0	1,100	1,200
Total	2,250,000	2,250,000	2,250,000

PREPARED STATEMENT

Senator HILL. The subcommittee will kindly come to order.

Dr. Heller, we are very happy to have you with us this morning. We will be delighted to have you proceed in any manner you see fit.

Dr. HELLER. Thank you, Mr. Chairman and members of the committee.

Mr. Chairman, I have prepared an opening statement which you may wish to include in the record, and also some supplementary material on chemotherapy and cytology, which is also available to be incorporated.

Senator HILL. All right, we can put all of that in the record at this point. We want all the information we can get on these subjects.

(The material referred to follows:)

STATEMENT BY DIRECTOR, NATIONAL CANCER INSTITUTE

Mr. Chairman and members of the committee, the program of the National Cancer Institute, including intramural and extramural research, has reached new highs in scope, total effort, and productivity in the past year. Plans for 1959 call for a budget of $55,923,000 to finance these activities.

Current studies are substantially increasing our understanding of viruses as a possible cause of cancer. Epidemiology and environmental cancer research are also contributing data on cancer causation and incidence.

Clinical investigations with the drug methotrexate in the treatment of choriocarcinoma have now been extended to include 17 patients, 1 of whom has remained free of cancer for about 30 months. Other new drugs undergoing clinical trial by Institute grantees include prednisone, prednisolone, and Mytatrionediol.

The chemotherapy program is benefiting from the cooperation of the pharmaceutical industry, which is taking a leading role in the search for anticancer agents. Chemotherapy continues to offer a good chance of finding effective means for controlling disseminated cancer.

Research on the cytologic detection of cancer has been expanded to include, in addition to uterine cervical cancer, tumors of several other body sites, such as the lung, bladder, large bowel, and prostate gland. Cytology also provides valuable epidemiological data on the incidence of cancer among various population groups.

For successful prosecution of its program, the Institute continues to aid in the training of young scientists in fields related to cancer research.

EFFECT OF HOUSE ACTION

The House provided an increase of $1,500,000 for this appropriation; $1,018,000 of the increase will be devoted to research grants, including cancer virus studies, $32,000 will be used to provide adequate review and approval of the additional grants, and $250,000 will permit expansion of work with viruses, the development of chemotherapeutic agents, and studies of tumor cells. The remaining $200,000 will be used in the chemotherapy contract activity.

FORMAL STATEMENT

Mr. Chairman and members of the committee, the year which has passed since I last appeared before this committee to discuss the program of the National Cancer Institute has been productive and rewarding. Progress is being made on so many fronts that many of us feel we may be nearing a number of major breakthroughs in our knowledge of these diseases we call cancer.

Thanks to the interest of this committee and the Congress, our research efforts this year have reached new highs in scope, total effort, and productivity. Scientists in universities supported by Institute grants have developed sound research projects which this year will utilize all such funds available. The cooperation of the pharmaceutical industry with our chemotherapy program as envisioned by this committee has become a reality. The use of exfoliative cytology in detection of cancer of body sites other than the uterine cervix is now under study in several locations. In our Bethesda facilities we have opened a new Pediatrics Unit to further our studies of leukemia and other cancers in children. I will report more specifically on some of the more exciting discoveries in our laboratories—particularly in the virus field. Our training programs continue to prove successful in producing the professional personnel for future advances in basic research and the control of cancer.

Our plans for 1959 call for a budget of $55,923,000 comparable to an operating budget of $55,937,000 this year. The new phases of our chemotherapy and

cytology programs will be in their first full year of operation. Research supported under grants and much of the research in our Bethesda laboratories will be along lines which have proved so rewarding in the past. At Bethesda the year should see a marked intensification of efforts to understand the role of viruses in the causation of cancer.

I should like to present in more detail some of the aspects of our program to illustrate why we look to the coming year with such optimism.

The four major categories of research conducted and supported by the Institute continue to be: (1) The causes of cancer; (2) the characteristics of cancer; (3) cancer detection and diagnosis; and (4) cancer treatment. To illustrate the advances made in cancer research in the past year, I would like to mention a few of the important research findings. I shall begin with a brief summary of some of the results of our studies on the role of viruses in cancer causation.

VIRUS STUDIES

The question of whether viruses cause human cancer has been a subject of intensive research, and even controversy, among prominent medical scientists for the past 50 years. The story of the search for the relationship between viruses and cancer has all the elements of a good detective story. The only trouble is that we can't turn to the last page of the story to read the solution.

The virus story concerns living cells, since cancer is believed to be a disease in which normal cells for some reason lose the property of growing in a regulated manner and instead grow wild and unrestrained. Knowledge of the complex structure of the cell is also still limited. But one of the most exciting discoveries about the innermost nature of the cell has been that a complex chemical, called nucleic acid, is a major constituent in every cell and plays a vital role in life processes. One type of nucleic acid, DNA, is localized in the chromosomes—the gene carriers—and is generally believed to be the actual genetic material. DNA appears to be the template, or blueprint, for the reproduction of living matter, with its special characteristics from one generation to the next. This same nucleic acid is also a major component of some viruses, and it is this component which seems to determine their disease-causing potential.

The suggestion that viruses might be in some way linked with the production of cancer was first advanced in 1903, shortly after the discovery of viruses. Because at that time no cancer had been demonstrated experimentally to result from inoculation with a virus, the suggestion was not taken seriously. A few years later in 1910, Dr. Peyton Rous, of the Rockefeller Institute, described a transplantable fowl cancer, which became known as the Rous sarcoma. In 1911 he described a filterable agent which was separable from the tumor and capable of transmitting it. This agent has been the subject of many investigations since that time and is now commonly known as the Rous sarcoma virus.

In the years since 1911, other viruses causing cancers in chickens, pheasants, ducks, and other fowl, as well as mice, frogs, rabbits, deer, and other animals, have been discovered. Today it is generally accepted that there are virus-induced tumors in animals and plants, but there is still little evidence that cancer in man is associated with viruses. Yet the belief that viruses cause human cancer is growing. Outstanding virologists like Dr. Wendell M. Stanley, of the University of California, are making statements like the following: "I believe the time has come when we should assume that viruses are responsible for most, if not all, kinds of cancer, including cancer in man, and design and execute our experiments accordingly."

So the stage is set and the time seems ripe that some major breakthroughs will occur in this idea of cancer research. Against that background, permit me to relate to you the results of two National Cancer Institute studies which we believe to have great significance. In one, a long-term quantitative study was made of the manner in which the Rous sarcoma virus produces cancer in domestic fowl. The investigator measured, for example, how long it takes a tumor to appear after the virus is injected, how quickly the tumor grows, how much virus can be extracted from the tumor tissue, and how long it takes for the tumor to kill the host. His results revealed certain facts and relationships which are contrary to scientific opinions and assumptions that have been held for a long time regarding the role of tumor viruses in producing cancer. He found that all the responses measured were related to the dose of Rous sarcoma virus used to induce the tumor. Consequently, the results of this study have produced two new concepts of the host-virus relationships. These state that (1) the Rous sarcoma virus is itself the direct cause of the cancer and is not merely the agent that acts indi-

rectly by triggering some inherent characteristic within the host; and (2) the biological properties of the tumor are related to the dose of Rous virus, and that, therefore, the absence of recoverable viruses in tumor tissue extracts does not necessarily rule out the classification of a tumor as having a viral origin.

In the other study, one of our scientists was attempting to confirm a report that cell-free extract of mouse leukemia produced leukemia in newborn mice. Oddly enough, leukemia did not result, but an unusual type of tumor which occurs spontaneously in mice only rarely was produced. This was a tumor of the parotid (salivary) gland. Attempts to transplant this tumor by injecting newborn mice with cell-free extracts prepared from the parotid gland tumors were not successful. But when, in collaboration with scientists of the Division of Biologics Standards, cell suspensions of parotid gland tumor tissue were grown in tissue culture for about 2 weeks and then the supernatant fluids from the cultures were injected into newborn mice, this substance took an explosive course and resulted in development of multiple primary tumors. All mice that developed such tumors had many types of tumors including primary parotid gland tumors, tumors of the thymus, adrenals, and mammary glands.

The investigators consider that the fluids contain a virus-like substance which has the capacity to produce cancers in many parts of an animal's body. In addition, they found that it has the capacity to produce cancers in non-inbread strains of mice; that is, to cross the so-called immunogenetic barrier. This is extremely important research, because it marks the first time that such a wide range of malignant growth have been produced experimentally by a cell-free filtrate having virus-like properties.

If we are able to achieve similar results with material extracted from human tumors—and if this material should prove to be a virus—we will indeed have made a major breakthrough. If it should be thus established that certain forms of human cancer are viral in origin, it might then be possible to immunize man against the disease. It is worthy of note that in one study, supported by a grant from the National Cancer Institute, a vaccine has been produced which protects 80 percent of mice from a virus-caused disease resembling leukemia. We do not know whether other scientists will be able to duplicate these results or whether they will have application to human cancer, because we have no proof that human cancer is caused by a virus. But, virus research is constantly adding to our store of knowledge; it may possibly enable us one day to develop a powerful weapon against human cancer—an anticancer vaccine.

OTHER RESEARCH ACTIVITIES

Causation

A grantee of the National Cancer Institute has demonstrated that it is possible to inhibit the cancer-producing effect of methylcholenthrene, a well-known chemical carcinogen, by adding orotic acid to the diet of experimental animals. This is an important development in testing our theory that certain cancers of environmental origin are preventable.

In another study, an Institute scientist has found that tumors of the testes induced in mice by administration of a female sex hormone can continue to grow when the stimulus is removed or when bits of the tumor are transplanted into new hosts. Until now, such tumors have been considered dependent for further growth upon continued hormonal stimulation. In other words, results of this study suggest that induced testicular tumors of the mouse have limited dependence upon hormonal stimulation for development and can achieve independence when the hormone is removed from hosts carrying primary tumors or when the tumor is transplanted into new hosts.

Characteristics

Institute scientists have reported the finding of a mouse tumor which closely resembles human multiple myeloma, a form of bone cancer. This finding may permit the study of this model of a human cancer in experimental animals which would be of tremendous value not only in understanding of the natural history of this disease but also in efforts to develop effective therapeutic measures against it.

Institute scientists have isolated and identified for the first time a structural unit in cells of the liver and spleen which has proved to be ferritin, the principal iron-storage compound of the animal body. This was done by electron microscopy, which is assuming increasing importance in the study of cancer.

A method of separation of soluble proteins from human blood serum by chromatography permits the study of disease states including cancer. Some of

the isolated proteins have been defined only in a physicochemical way, and their biological significance remains to be determined. Enzymes may be concentrated—even purified—in the same way, and the possibility that filterable viruses may also be concentrated by these techniques is being explored.

Treatment

Last year I told the committee about the apparent suppression of a malignant tumor in four patients following administration of a drug—methotrexate—by National Cancer Institute scientist. The cancer was choriocarcinoma, a solid tumor of the uterus which occurs very rarely after pregnancy. As of now, 17 patients have been treated for this disease by drug therapy, and we are extremely encouraged by the outcome. Not only did the primary uterine tumor apparently disappear in these patients, but so did secondary lesions in the lungs. These are the first reported cases in this country of the suppression of a solid malignant tumor by drugs alone. One of the women has remained totally free of cancer for about 30 months, a testament to the effectiveness of this therapy.

In another grant-supported study, the administration of large doses of prednisone or prednisolone, newly synthesized compounds which are chemically related to cortisone, has produced clear-cut remissions in both children and adults with acute leukemia. Of the 18 patients treated in this study, complete remissions occurred in 5 adults and partial remissions were observed in 6 adults and children.

Experiments on the treatment of cancer in mice have shown that sensitization of the tumor by administration of anticancer drugs augments the effectiveness of radiation therapy. A group of National Cancer Institute grantees observed that mammary tumors treated by both X-rays and antimetabolites quickly began to show regression. This effect was still apparent at the end of the observation period. More tumors treated by both X-irradiation and anticancer agents regressed completely than did tumors treated by either X-rays or chemicals alone. The investigators conclude that the limit of curability of cancer by radiation is no longer determined by a lack of sufficiently powerful radiation sources. They further suggest that the sensitization of a tumor by biochemical means appears to be an important method of increasing the response of malignant cells as compared with that or normal tissue.

Total removal of the right lobe of the liver in order to cure cancer has been successfully performed by a grantee of the National Cancer Institute. The patient was a 14-year-old girl who presented the typical picture of sudden onset, relatively little stomach and intestinal disturbance, and a large abdominal mass. Surgical exploration revealed a cancer of the right lobe of the liver, which was at the time considered inoperable. The tumor was heavily irradiated, causing a 50-percent reduction in size with considerable increase in the firmness of the tumor and surrounding liver tissue. It was then determined that the affected lobe could be safely removed by surgery. The operation was carried out, and the patient was released 19 days later in apparently good physical condition.

The problem of administering effective doses of radiation to cancer patients without producing undesirable systemic side reactions demands intensive investigation in both clinical and preclinical areas. Administration of therapeutically effective doses without these reactions has been accomplished in treating superficial cancers, especially mycosis fungoides in human patients, with a 3-million electron volt electrostatic generator in the Clinical Center. Study of tumordose relationships in X-ray therapy of cancer reaffirms the concept that the volume of tissue included in the target area may be a serious limiting factor in determining the dose that may be given without complications. A drug which reduced the deleterious effects of total body X-irradiation in experimental animals is being studied for its possible influence on therapeutic irradiation.

Some general aspects of research

A technique recently developed by members of our staff now permits accurate, quantitative measurement of radiation exposure to the whole body surface regardless of whether the exposure results from therapy or from accidental causes. The technique is applicable only in persons whose heads have been exposed to radiation and involves microscopic examination of scalp hair roots. The investigators found that damage to the hair roots correlates precisely with the amount of radiation exposure and the interval between exposure and examination. Copies of the paper in which this procedures is described have been

requested by the United Nations Scientific Committee on the Effects of Atomic Radiation.

We are continuing an intensive study of environmental cancer with much of the work being accomplished through field studies. The survey of the health of uranium miners is continuing. About 3,000 miners have been examined at least twice. A few cases of lung cancer were detected. However, the studies must be carried on much longer before any significant data can be developed. The National Cancer Institute is collaborating with the air-pollution medical program of the Public Health Service in a 2-year study of the carcinogenicity of air pollutants. Investigations will also be continued on occupational exposure that may increase the risk of industrial workers to different types of cancer. A study of the relationship of environmental factors affecting mothers and the risk of leukemia developing in their children is continuing to produce important, although preliminary, findings.

It is to be expected that certain aspects of cancer research may be emphasized for varying periods. However, research is so interdependent that one area cannot advance far without contributions from advances in other areas. Because biochemistry is fundamental to several research areas, it is clear that research in this field should be encouraged. Viruses, as previously stated, are becoming increasingly important both in cancer causation and treatment. New techniques for studying viruses and their life processes in cells should be extended to human cancer. Why does cancer attack some people and not others? Research on the part played by heredity in the susceptibility of a cell to become cancerous and in its ability to influence cellular growth and reproduction must be pursued and expanded. Recent research has suggested the possibility that antibodies can be induced against cancer in man. This, as I mentioned before, suggests that eventually we may be able to vaccinate people against some forms of cancer. Obviously, this work should be pushed ahead as rapidly as possible. These are a few of the aspects of cancer research which will receive particular attention and be explored to the fullest possible extent in fiscal 1959.

CHEMOTHERAPY

The chemotherapy program now constitutes approximately 10 percent of the total NIH budget. If one includes funds being expended from other sources, cancer chemotherapy research probably accounts for approximately 10 percent of the total national health research effort. We regard this as appropriate since with the tools and information now at hand, chemotherapy appears to offer a good chance to find an effective means for controlling disseminated cancer. This guarded optimism appears to be shared by many companies in the pharmaceutical industry which have recently begun to invest substantial sums of stockholders' funds in cancer chemotherapy research.

The appropriation of funds for industrial contracts in the current fiscal year has permitted the establishment of a major research and development contract program with industrial concerns. The contracts support inplant screening programs, research on methodology, or pilot plant production of otherwise unobtainable materials in quantities sufficient for clinical trial. A few contracts are for the synthesis of new chemicals but for the most part industry is bearing the full cost of developing new materials.

This greatly increased industrial participation so eagerly sought by the National Cancer Institute and the Congress has necessitated the amplification of DHEW patent policy to meet the special problems related to industrial research contracts. Under this policy the Government is in a position to finance the testing of industry-developed chemicals without charge to the company and without loss of proprietary rights in the compound to the company. The result has been a major increase in company funds invested to develop new compounds. The patent policy also provides for situations in which the company is willing to undertake drug development but does not feel justified in investing company funds. In such instances the patent policy permits the company to own patents covering inventions made in the course of the contract, subject to certain limitations designed to protect the public interest. These limitations include a royalty-free license to the Government for Government uses and a march-in clause which permits the Government to license competitors on a royalty-free basis if the inventing company, after a reasonable period of time, fails to supply the market with adequate quantities of the drug at high quality and reasonable price. Although some objections have been raised to certain criteria for marching in and some details of the method of licensing, industry appears to regard this

policy as fair and equitable; it affords greater rewards to the company willing to finance its own drug development without unduly penalizing the company which seeks Government support for its drug development research.

We are optimistic that the participation of the pharmaceutical industry will greatly accelerate progress in the program—progress which could not be achieved without the skills, facilities, and investments which are now being made in order to locate new drugs and to isolate the active substance in the antibiotic filtrates or beers.

One aspect of the chemotherapy program requires special mention. The program has grown in what can be characterized only as growth in an explosive manner. We are quite proud that despite this, Dr. Endicott, with the advice and counsel of superior groups of scientists, has built soundly. However, the program needs and in fact demands a period of evaluation and adjustment.

It is already apparent that it contains imbalances which were an inevitable result of rapid growth. The screening, we believe, with our industrial contracts, will be adequately covered for some time to come. The chemical workup of potentially useful compounds from antibiotic beers is also well covered, organic synthesis of new compounds and large-scale synthesis for clinical trial have been provided, systematic work on the development of more generally useful testing is underway, and a broad base for clinical testing has been established.

However, no adequate provision has been made for the most difficult step of all; i. e., intermediate workup prior to clinical trial. This deficiency has received special attention during the current year, but at least another year will be required, I believe, to satisfy the need fully as it continues to emerge. This is essentially a requirement of time rather than money. I have cited this as one example of a program imbalance in chemotherapy; there are others.

The budget that is before you, therefore, provides for the Cancer Chemotherapy Service Center and its advisory groups to be given a period of time for a "shakedown cruise" within the present dollars available. This level of support is needed, but a period of time is necessary for sound program adjustment so that funds may be utilized in the most economical and effective manner.

A detailed presentation of the chemotherapy program is being submitted separately for the record.

CYTOLOGY

In past years the committee has heard extensive reports on our progress in developing the cytologic test as a case-finding tool. I should like now to bring the cytology story up to date.

There are 10 cytologic research units in operation by the National Cancer Institute and 3 additional screening projects financed by grants. Ten of these 13 are uterine cytology projects, and the other 3—plus 1 to be established this year—are for investigation of the possibility of applying cytology to the detection of cancer of other body sites.

It is as yet too early to say whether cytology will be as useful in detecting other forms of cancer as it is in detecting cancer of the uterus. We can only hope that this technique will enable the physician to establish an earlier diagnosis and thus gain better management of cancer of such sites as the lung, urinary bladder, large bowel, and prostate gland.

Uterine cytology is, of course, valuable as a case-finding procedure; but it has also proved to be extremely useful as a means of gathering epidemiological data on the incidence of uterine cancer among differing groups of women. During the year, a cytology project was established in cooperation with the International Ladies' Garment Workers' Union in New York City from which we should be able to get interesting and valuable epidemiological data. In this study, it may be possible to compare the incidence of uterine cancer among women of several ethnic groups—Italian, Irish, Jewish, and Puerto Rican. Incidentally, in an epidemiological study it has been observed that cancer of the uterine cervix is nearly four times as common among non-Jewish women of New York City as among Jewish women of either New York City or Israel. We do not know the explanation for this phenomenon, but the observation may provide leads which will help to explain variations in the incidence of uterine cancer.

Another cytology project has been established at the Women's Medical College of Pennsylvania, where women employed in industry will be studied. Here, too, we hope to be able to gather information on incidence as well as to detect the disease in its earliest most curable stages.

This is another program which, like chemotherapy, has been developed to a stage where we believe a leveling off is needed for a "shakedown" period. We

have a sufficient number of pilot projects established in which to continue our observations on the efficacy of the cytologic test as a case-finding technique and an aid to early diagnosis of uterine cancer. We also have, or will have, as I have indicated, several projects for research on the application of this test to the early detection of cancer of other body sites. The cytology program is continuing for the time being at its present required level of support in order that funds may be utilized economically and effectively for research which we are confident will continue to develop useful procedures for employment of the cell examination test in public health and medical practice.

A detailed statement on the development and status of the cytology program is also being submitted separately for the record.

OTHER DEVELOPMENTS

In addition to the programs I have singled out for special mention, there are, of course, many and varied activities of the National Cancer Institute which are no less essential to the successful prosecution of our mission to reduce mortality from cancer.

In order for research and medical practice to function effectively there must be rapid and dependable communication. Among scientists this is accomplished by the publication of research findings and discussion of them in conferences and seminars. To serve these purposes the National Cancer Institute continues to publish its journal on a monthly basis. Our people attend scientific meetings, conduct seminars, and confer with visiting scientists from all over the world.

Communication of information and educational materials to the lay public also continues to be an important Institute activity, for the layman must be alerted to the necessity of cooperating with his physician if cancer is to be effectively controlled.

In both professional and lay information and education activities the Institute cooperates freely and effectively with the American Cancer Society and other groups and interests devoted to the cancer problem.

The training of scientists in fields related to cancer research is another important activity of the National Cancer Institute. The success of cancer research depends largely on the supply of specially trained, imaginative research scientists who are willing to enter the field of cancer research and who are academically and professionally qualified to do so. The shortage of such personnel is a serious problem in cancer research as it is in all scientific fields. We are aware that the problem cannot be solved overnight. The training of a research worker is a slow and expensive process. To help meet this shortage of scientific personnel, the National Cancer Institute provides financial support to promising scientists so that they may obtain training in their chosen fields.

Institute funds are also used to improve instruction in the diagnosis and treatment of cancer received by students in medical, dental, and osteopathic schools, and for the training of young clinicians who wish to specialize in cancer work.

One of the most important developments of the past year was the establishment of a Board of Scientific Counselors to advise the Institute on the development of its intramural research program. We are fortunate in having as chairman of this body the distinguished Nobel prize winner, Dr. Wendell M. Stanley of the University of California, who recently completed a term of office as a member of the National Advisory Cancer Council.

CONCLUSION

The total program of the National Cancer Institute, operating at its present level, is making an impact on the cancer problem. The close relationship of laboratory research to clinical research at Bethesda, the widespread and diversified character of our grant-supported research, and the scope of the cooperative chemotherapy program, with its emphasis on industrial cooperation, are providing a momentum which was unknown in the cancer field a few short years ago. Research developments of quite recent months—some of which I have mentioned today—are serving to indicate the places where important breakthroughs may be expected in the not too distant future. These breakthroughs may lead to better understanding of the origin and nature of cancer; they may open direct and short paths to drug cures; they may point the way to widespread prevention of cancer through immunization. No matter what form these blessings may take, and no matter from what direction they may come, we can be certain that they will be the results of research.

EFFECT OF HOUSE ACTION

The House provided an increase of $1,500,000 for this appropriation; $1,018,000 of the increase will be devoted to research grants, including cancer virus studies, $32,000 will be used to provide adequate review and approval of the additional grants and $250,000 will permit expansion of work with viruses, the development of chemotherapeutic agents and studies of turon cells. The remaining $200,000 will be used in the chemotherapy contrast activity.

BACKGROUND STATEMENT ON CANCER CHEMOTHERAPY PROGRAM

In April 1955, the National Cancer Institute initiated a series of steps designed to create a truly national program of cooperative research on the chemotherapy of cancer. Five other agencies, Atomic Energy Commission, Veterans' Administration, Food and Drug Administration, American Cancer Society and Damon Runyon Memorial Fund joined this institute as cosponsors and established the Cancer Chemotherapy National Committee as the top policymaking body. To provide advice on industrial aspects, the national committee established an industry subcommittee. The institute established a full-time staff organization, the Cancer Chemotherapy National Service Center to implement the program. Five technical panels (chemistry, screening, endocrinology, pharmacology and clinical) were appointed to provide technical advice to the center and the national committee.

Fiscal year 1956 (July 19, 1955 to June 30, 1956) was the first year of the new program and was marked by a number of important milestones:

(1) Congress appropriated $5 million specifically earmarked for cancer chemotherapy.

(2) Congress authorized the use of negotiated contracts.

(3) The center started its mass screening program.

(4) A pharmacology laboratory was created at FDA.

(5) Several cooperative clinical studies were launched.

In fiscal year 1957 (July 1, 1956 to June 30, 1957) there was a major expansion of almost every facet of the program. Of especial importance were the following:

(1) Congress increased the appropriation to nearly $20 million and earmarked $5 million for research on steroid hormones.

(2) Congress appropriated $700,000 for research training grants and a number of training grants were made.

(3) The screening program expanded to an annual rate of more than 30,000 materials and the problem of mouse supply was brought under control.

(4) A hormone assay program was started in order to select steroids for clinical trial.

(5) Large-scale clinical screening of new steroids in breast cancer was begun (20 to 40 steroids per year).

(6) An industrial pilot plant for quantity production of new steroids was set up at the Upjohn Co.

(7) An extensive statistical study of the natural history of human cancer under modern therapy was launched in cooperation with selected tumor registries.

In fiscal year 1958 (July 1, 1957 to June 30, 1958) the outstanding development has been the launching of an industrial contract program. Of especial interest are the following:

(1) Congress increased the appropriation to $25 million of which more than $6 million is specifically earmarked to be used in mobilizing the industrial research potential.

(2) A Contract Review Board has been established to recommend action on contract proposals.

(3) Research and development contracts are being negotiated with most of the major pharmaceutical companies and a few of the smaller concerns. A special patent policy has been adopted for these contracts.

(4) More than 100 companies are participating in the program by submitting chemicals and natural products for anticancer screening.

(5) Further expansion of primary screening is being accomplished by establishing "in-plant" screening programs. The annual rate of screening is at a level of 40,000.

(6) Clinical studies of the effect of combining chemotherapy with surgery in treatment of bronchogenic and gastric cancer were started on a large scale.

(7) Fifteen cooperative clinical groups in 165 hospitals are studying 44 compounds in 1,800 patients.

TABLE I.—*Scope of the existing program supported by funds appropriated to NCI*

	1958 estimate		1959 estimate		Increase or decrease	
	Positions	Net cost	Positions	Net cost	Positions	Net cost
Research projects		[1] $11,200,000		$10,670,000		−$530,000
Training grants		700,000		700,000		0
Professional and technical assistance (National Cancer Chemotherapy Service Center)	106	758,000	106	758,000	0	0
Chemotherapy contracts	51	11,810,000	51	12,365,000	0	+555,000
Total, cancer chemotherapy program	157	24,468,000	157	24,493,000	0	+25,000

[1] Increased by $530,000, from contracts funds in the 1958 operating budget.

The cancer chemotherapy program includes a variety of activities such as research training, fundamental research, independent research projects, interinstitutional research projects, testing programs operated on a service basis, "inplant" testing programs, pilot plants, a centralized cancer registry, an information exchange, a bibliographic service, a chemical procurement service, a biostatistical consultation service, etc. These activities are supported through grants or contracts or as a direct operation of the center staff.

Research grants.—In general, research grants support independent projects conceived and advocated by individual scientists in nonprofit academic institutions. To a large extent these projects are concerned with the more fundamental aspects of cancer chemotherapy and the investigators participate in the cooperative programs of the service center to a very limited extent.

There are several categories of research grants which represent major exceptions to this generalization. These are: (1) grants for synthesis of chemicals to be tested by the center, (2) grants for group clinical studies, (3) grants for large integrated programs, and (4) grants for special services, such as bibliographies, symposiums, publications, and travel incident to program planning and group research.

The distribution of cancer chemotherapy research grants by major categories as of February 1, 1958, is shown in table II. This tabulation is somewhat misleading in that each grant is assigned to a single category according to its major emphasis even though the grant supports work in several categories. Items 6 and 7 actually represent lump sums which generally support efforts in all of the first 5 categories.

TABLE II.—*Distribution of cancer chemotherapy research grants by categories as of Feb. 1, 1958*

Category	Number of grants	Dollars
1. Synthesis or preparation of agents	79	$976,444
2. Laboratory screening of agents	48	1,594,134
3. Pharmacology and mechansim of action of agents	55	1,076,572
4. Clinical evaluation of agents	76	1,950,448
5. Basic researches related to cancer chemotherapy	149	2,766,140
6. Large integrated programs of cancer chemotherapy	23	2,366,698
7. Information, training, and special services	6	291,734
Total grants committed	436	11,022,170
8. Balance of funds available		177,830
Total program		11,200,000

Training grants.—The purpose of these grants is to increase the trained manpower pool in shortage areas related to cancer chemotherapy. The grants provide funds for stipends of trainees and in some instances funds for a portion of the cost of the training. Thirteen grants totaling $700,000 have been made.

Research contracts.—This activity contains much of the programed research of the center and the national program. In general, contracts support the applied and developmental research initiated by the center upon advice of its panels.

Each panel, from time to time, reviews the state of knowledge in its particular area in order to identify neglected fields which require additional emphasis. The panel then outlines needed projects and requests the center to invite specific contract proposals. These proposals are reviewed by the panel and subsequently by the contract review board. If approved, the proposals are converted into active contract by negotiation between the NIH and the prospective contractor. The contracts may be on a fixed-price, a cost, a cost-plus-a-fixed-fee, or a cost-sharing basis. Contracts are let on an annual basis. In some instances, the contractor is notified of the Government's intention to continue the project over a stated number of years if funds are available.

In table III is shown an analysis of the contract program. Since contracts are subject to negotiation and frequent amendment by the contract officer, the amount of funds designated for each category is only approximate.

TABLE III.—*Recapitulation of contract program, fiscal year 1958 (Feb. 1, 1958)*

Purpose	Number of contracts	Amount
Nonindustrial:		
Routine screening	10	$3,851,841
Routine hormone assay	1	21,400
Methodology secondary screening and related services	14	518,331
Chemical synthesis	5	615,134
Pharmacology	1	179,801
Steroid preparation	1	10,689
Animal procurement	3	169,521
Statistical services	4	137,718
Tumor registers	15	182,514
Transfer to other Government agencies		518,000
Chemical purchases		[1] 325,000
Total, nonindustrial	54	6,529,949
Industrial:		
Fermentation products	1	178,850
Drug development	3	624,875
Prep laboratories	4	564,000
Steroid synthesis	1	145,000
Screening	1	18,985
Methodology	3	576,000
Screening and methodology	6	2,143,909
Total, industrial	19	4,251,619
Total, nonindustrial and industrial	73	10,781,568
Fiscal year 1958 contracts expired		360,128
Audit reserve		50,000
Estimated costs of renewals in fiscal year 1958		296,200
Available for future contracts		322,104
Grand total		11,810,000

[1] Estimated.

As the appendix there is attached (1) a list of active contracts, (2) a list of recommended contracts under active negotiation, and (3) a list of funds transferred to other agencies.

The center staff and advisory groups are concerned primarily with planning and implementing a national program of voluntary cooperative research. To the extent that program objectives can be reached through independent spontaneous efforts of individual scientists or groups of scientists, the center deliberately pursues a "hands off" policy. Thus research grants in the chemotherapy area are reviewed and administered outside the center. In order to make these independent efforts as effective as possible, the center offers a variety of services to

the investigators, such as, providing chemicals, labeled compounds, screening tests, pharmacologic studies, or clinical trial when these are not available to the investigator. The center also maintains an up-to-date bibliography and library of reprints and provides information through publications and upon request. Another service to independent investigators is the sponsoring of symposia and seminars.

To an ever-increasing extent, cancer chemotherapy research requires extensive interinstitutional cooperative efforts. Such programs are generally planned, financed, and coordinated by the center and its panels. Examples of such programs are (1) a centralized screening program which handles 40,000 materials per year from several hundred suppliers all over the world, (2) controlled clinical trials in which many hospitals work together on the same chemicals and the same types of tumors, and (3) a centralized tumor registry which draws data from cooperating States and institutions on approximately 500,000 cancer cases in order to establish the natural history of various types of cancer under modern conditions of diagnosis and treatment.

MAJOR NEW AREAS OF PROGRAM EMPHASIS

Industrial participation.—During the past 13 months there has been a tremendous upswing in the extent to which industry is participating in the program. Industry is now supplying more than three-fourths of the chemicals and natural products being screened.

With increased funds appropriated by Congress for this purpose, the center is launching a major research and development contract program with companies in the pharmaceutical and chemical industry; 19 contracts amounting to approximately $4,251,619 are under negotiation with 13 companies.

In order to implement this program it has been necessary to develop a special policy regarding ownership of patents. The new policy was approved by the Department of Health, Education, and Welfare on September 9.

Secondary screening.—With the primary screening program operating at a level of approximately 40,000 materials per year, several interesting materials are being detected every week. Emphasis is now being placed on secondary screening and on short-cut methods for assaying fractions in connection with isolation of fermentation products. Better methods for eliminating materials without clinical trial must be developed since there isn't the clinical capacity to test all of the positive chemicals.

The pharmacology of the alkylating agents.—Under the guidance of the New Agents Committee of the Clinical Panel, an intensive study of the alkylating agents is being carried out with the combined efforts of a number of laboratories and hospitals. The objective here is to determine whether specificity and effectiveness of these agents can be increased through modification of chemical structure.

The use of chemotherapy as an adjunct to surgery.—Surgeons in 47 hospitals are now testing the effectiveness of chemotherapy administered at the time of surgery for cancer of the lung and cancer of the stomach. It is hoped that chemotherapy may reduce the incidence of recurrence by destroying individual cancer cells or small clumps of cells dislodged into the circulation by the trauma of surgery.

Interesting new agents.—There is currently considerable interest in a rather wide variety of agents. (*a*) Antibiotics: Most of the companies with active fermentation programs have at least one anticancer antibiotic nearing the stage of clinical trial. The Japanese antibiotics, mitomycin and carcinophillin, are being readied for clinical trial. Chemical variants of actinomycin are under active study, and several are in preliminary human trial. (*b*) Alkalating agents: In addition to the antimalarial mustards of Price and Jones, several alkylating agents of new types are being introduced by American companies. Two German compounds, E–39 and A–139, developed by Domagk, are under active study. The British compound, C. B. 3025, and the Hungarian compound, mannitol-mustard, are in clinical trial. (*c*) Antimetabolites: The halogen-substituted antimetabolites are receiving much attention this year, especially fluorine substituted uracil, uracil riboside, and orotic acid. A miscellany of substituted purines are under study for possible clinical trial. Several pyrazolopyrimidines are in preclinical pharmacology in the hope that they will show less liver toxicity than the 4-amino compound. NSC 1026, 1-aminocyclopentane-1-carboxylic acid, the first "open'" compound to show activity in the C. C. N. S. C. screening program is under study at F. D. A. but is showing cumulative chronic toxicity and may never go

to clinical trial. (*d*) Steroids: More than 30 steroids are in trial against breast cancer. Thus far only one shows any promise of being superior to testosterone, and this is based on incomplete results. Several commercial corticoids have proven useful in acute leukemia, showing greater potency than metacortin and decreased side effects, but preliminary results do not suggest that the new compounds represent any major advance. (*e*) Carcinogens: One of the best known chemical carcinogens, methylcholanthrene, has been shown by Huggins to produce remissions in breast cancer. No doubt this observation will result in the reexploration of the area of polycyclic hydrocarbons and other chemical carcinogens. (*f*) Miscellaneous: Among the 90-odd synthetics showing antitumor activity in the C. C. N. S. C. primary screening program are several which do not appear to fall into any of the above groups. These include glyoxal tetrabutylacetal; N,N′, P-triphenylphosphoro-thioic diamide and 1-methyl-2(1H)-pyridone. Selection of agents for clinical trial is now actually underway from among the large number of possible candidates which have turned up in the C. C. N. S. C. screening program.

PROBABLE FUTURE TRENDS

It is our impression that the chemotherapy program should plateau at approximately the present level for the time being in order to permit the staff, advisory groups, grantees, and contractors to work out the many problems related to achieving a smooth, efficient cooperative program.

At present, it would appear desirable to strengthen certain activities. The clinical evaluation of new steroids suffers for lack of adequate data on the effect of these steroids on the endocrine balance of the patient. The secondary testing of agents showing activity in the primary screen is not adequate either qualitatively or quantitatively. The lack of accurate micro methods for assaying fractions is a major obstacle in the antibiotic area. We hope to achieve the necessary strengthening of these program areas through grants and contracts now being activated.

If these efforts succeed, new problems are likely to be created. One such problem, which could assume large proportions, would be the problem of financing extensive pilot-plant production of new antibiotics in quantities adequate for pharmacology and clinical trial. Another would be the problem of providing adequate clinical trial of a greatly increased supply of interesting new agents. Should such problems arise they must be met, but for the present it would appear that program needs can be satisfied by adjustments between areas without any major increase in the level of the total program.

APPENDIX A

List of active contracts

	Amount
Fiscal year 1957 funds, active contracts:	
Prep Laboratories: The Upjohn Co	$150,000
Synthesis:	
Southern Research Institute	165,000
University of Chicago	25,000
	190,000
Screening and screening methods:	
University of California	25,000
Hynson Westcott and Dunning	14,000
University of Miami	93,000
Do	31,000
Rutgers University	43,600
Southern Research	177,000
Do	120,000
	503,600
Hormone assay:	
Biologica Testing Laboratories	133,000
Worcester Foundation	257,000
	390,000
Total active contracts, fiscal year 1957 funds	1,233,600

List of active contracts—Continued

	Amount
Fiscal year 1958 funds, active contracts:	
Synthesis:	
Columbia University	$10,000
Arizona State	38,600
Monadnock Research Institute, Inc	53,900
Stanford Research Institute	427,600
	530,100
Screening and screening methods:	
Kansas University	20,818
Battelle	229,500
Sloan Kettering Institute	116,850
Michigan State Department of Health	26,800
Arthur D. Little, Inc	242,000
Microbiological Associate	450,000
Southern Research Institute	900,000
Stanford Research Institute	215,400
Wisconsin Alumni Research Foundation	258,000
Hazleton Laboratories, Inc	234,500
Armour Research Foundation	247,000
Arthur D. Little, Inc. (tissue culture)	45,100
National Academy of Science	10,000
Hahnemann Medical College	31,500
Worcester Foundation	21,400
Haskins Laboratories	36,680
University of California	18,745
Roscoe B. Jackson Laboratories	2,400
	3,106,693
In-plan screening and methodology:	
Abbott Laboratories	208,010
Chas. Pfizer & Co	1,186,000
	1,394,010
Pharmacology: Christ Hospital Institute for Experimental Biology	179,000
Statistical servicing:	
University of Pittsburgh	30,300
University of North Carolina	19,900
Health Research, Inc	26,200
New York University	61,400
	137,800
Tumor registers:	
University of Virginia	8,099
New York Medical College	8,131
University of Chicago	11,458
Health Research, Inc	10,164
Indiana University	8,613
Michigan University	9,890
University of Pittsburgh	11,845
Service Bureau Corp	5,975
Charity Hospital (Louisiana)	11,483
University of Iowa	12,605
University of California	14,310
Service Bureau Corp	11,100
Sloan-Kettering Institute	5,702
	130,375
Service contract (integrated data processing system): Documentation, Inc	51,300
Total active contracts, fiscal year 1958 funds	5,529,278
Total active contracts	6,762,878

List of approved contracts under active negotiation Feb. 1, 1958

	Number of contracts	Amount
Nonindustrial purpose:		
Screening and screening methods	9	$1,793,250
Chemical synthesis	2	95,000
Tumor registers	4	104,341
Total nonindustrial	15	1,992,591
Industrial purpose:		
Fermentation products	1	178,850
Drug development	3	624,875
Prep laboratories	4	564,000
Steroid synthesis	1	145,000
Screening	1	18,985
Methodology	3	576,000
Screening and methodology	4	749,899
Total industrial	17	2,857,609
Total contracts under active negotiation	32	4,850,200

SUMMARY FISCAL YEAR 1958 CONTRACT FUNDS

Contracts awarded in fiscal year 1957, still active	12	1,233,600
Contracts awarded in fiscal year 1958, still active	43	5,529,278
Contracts awarded and completed fiscal year 1958	6	360,128
Agreements with other Government agencies for research and audit	5	568,000
Available for future contracts		5,352,594
Total available for contracts, fiscal year 1958		11,810,000

BACKGROUND STATEMENT ON CANCER CYTOLOGY PROGRAM

Early and accurate diagnosis of cancer is one of the primary goals of cancer research. Progress depends largely on increased information about the development of tumors, and the changes in appearance that normal cells undergo when they become tumor cells. The cytologic method has proved useful for detecting early uterine cancer and may help in detecting cancer of other organs such as stomach, bladder, kidney, lung, and intestine.

Exfoliative cytology in human beings has been steadily developed by the Field Investigations and Demonstrations Branch, National Cancer Institute, during the past several years as a technique for the early recognition of cancer of several different body sites. This development has been accomplished by the establishment and operation of several research projects including method research, technique development, and epidemiological data gathering in many different areas in the country. In the process of the development of newer methods and techniques, and collection of epidemiological data, numerous cases of early cancer have been discovered and treated. These projects are established to obtain complete cytological, pathological, clinical, and epidemiological information in each instance of cancer found. This ideal has met with few exceptions.

There are many questions in connection with the cytologic technique which must be answered before it can be accepted as a method of detecting cancer in its very early stages. There are insufficient data presently available, for example, to indicate the exact relationship of carcinoma-in-situ to invasive cancer—that is, whether the in-situ lesion invariably progresses to invasive cancer or what percentage does so progress; the incidence of carcinoma-in-situ by age; the average duration of carcinoma-in-situ; and the average age of occurrence and incidence of invasive cancer.

The initial pilot project in vaginal cytology was established in 1947 in Hot Springs, Ark. This pilot project attempted to determine the usefulness of the cytological method in screening large population groups as a technique for collection of research data. The results of this pilot study are indicated in the reports of Koplin, (1) Nelson and Hilberg (2).

In 1951 the pilot project was moved to the University of Tennessee in Memphis, Tenn., to expand the activity to a larger and more suitable population group.

The Memphis project, as it is popularly called, has continued in operation to the present and is reported in several publications by its staff (3, 4, 5, 6, 7).

In 1954 it became obvious from the results of the Memphis project that additional population groups were needed to enlarge upon the research data necessary for an overall approach to the problems of method and technique of exfoliative cytology and problems of epidemiological factors involved in early uterine cancer. It is estimated that no less than 700,000 women must be tested, with at least 30 percent of these screened 3 times, if reliable results are to be obtained. At the same time there was an indicated need for the application of the cytological techniques to the problem of detection of early cancer in other body sites.

There are now 10 cytologic research projects in operation and an additional project is scheduled to be started late in 1958. Eight of the 10 projects are investigating the application of the cytologic method to uterine cancer, while the remaining 2 (and the additional project in planning) are investigating the possibility of the application of the cytologic method to cancer in other body sites—such as the lung, large bowel, and the bladder.

The research projects in vaginal cytology and the local cooperating groups are listed below:

1. *Columbus, Ohio* (8).—A cervical cancer screening program was started in 1956, using the vaginal aspiration technique, and is similar to the pattern of the Memphis study in many respects, but differs in that it concerns itself with an entirely different population area and socioeconomic group. The study represents a potential of 185,000 to 215,000 women over 20 years of age in the greater Columbus metropolitan area. Approximately 50,000 first examinations have been completed. A recall program for second examinations is now in progress. Studies are being made to compare the results of different methods of securing the cells to be examined.

The Ohio State University Health Center
The Columbus Cancer Clinic
Ohio State University Medical School

2. *Louisville, Ky.* (9).—This cervical cancer project was also initiated in 1956, and is proceeding along the lines of securing data on specimens collected by means of cervical swab and cervical scraping techniques. The study is designed to obtain data related to the occurrence of cervical cancer in a potential population of 175,000 women over 20 years of age. A special effort is being made to obtain incidence, prevalence, and pathogenesis data on cervical cancer in women in the 15–20-year age group. Approximately 28,000 first examinations have been completed.

UNIVERSITY OF LOUISVILLE SCHOOL OF MEDICINE

3. *Madison, Wis.*—This cervical cytologic investigation which was started in 1956 is designed to gather prevalence, incidence, and pathogenesis data on uterine cancer in a rural socioeconomic group of North European ancestry. A secondary benefit of this investigation will be to test the feasibility and practicability of extending the use of a central laboratory. Physicians in outlying communities obtain specimens which are mailed to the central laboratory for clinical diagnosis. It is estimated that 135,000 women over 21 years of age will be included in this study which will provide data concerning the incidence of cervical cancer in a rural population. Approximately 29,000 women have been examined one time. Women are now beginning to be recalled for the second examination.

UNIVERSITY OF WISCONSIN MEDICAL CENTER, STATE LABORATORY OF HYGIENE

4. *Memphis, Tenn.*—This study, which uses the vaginal aspiration technique, is concerned with cancer of the cervix and has been in operation since 1952. It has provided much of the information used as a starting point for establishing the other uterine cancer cytology studies. Over 160,000 women have been benefited by participation and have contributed to the body of cancer knowledge. The project has served as an important area for training of technicians in the cytologic technique which is necessary for its extension in other communities. Analysis of the data accumulated at Memphis is in progress.

UNIVERSITY OF TENNESSEE MEDICAL SCHOOL, INSTITUTE OF PATHOLOGY

5. *New York, N. Y.*—Negotiations have been completed recently with a large labor organization for cervical cytologic examination of regular female clinic

patients. The goal of this study is to develop sound statistical information relative to prevalence and incidence rates and epidemiological data pertaining to different ethnic groups. Because of the health services furnished to these union members it is anticipated that repeated testings will be facilitated. This will permit close observation and retesting for obtaining some of the answers to questions concerning these ethnic groups and the relation of preinvasive to invasive cancer. Laboratory diagnostic activities are carried out by the Washington, D. C., project.

INTERNATIONAL LADIES' GARMENT WORKERS' UNION HEALTH CENTER

6. *Philadelphia, Pa.*—The objective of this project, which was initiated in early 1957, is to gather information by use of vaginal cytology regarding the occurrence, progression and/or regression of uterine cervical metaplasia and carcinoma-in-situ. The study group will be comprised of women employed in Philadelphia industries, which is considered to be a stable population from whom repeat tests can be obtained readily. It is anticipated that this study group will yield data on about 40,000 to 50,000 women on whom at least 3 cytological examinations will have been made during a 3- to 4-year period.

WOMAN'S MEDICAL COLLEGE OF PENNSYLVANIA, DEPARTMENTS OF PATHOLOGY, PREVENTIVE MEDICINE, GYNECOLOGY, AND ONCOLOGY

7. *San Diego, Calif.*—A small study project of cervical cancer was initiated in 1956, concerned primarily with an investigation of the possible relationship between socioeconomic factors and the occurrence of cervical cancer. The study group is comprised of indigent women as well as private patients who are examined by means of vaginal cytology. It is expected that a comparison of the occurrence of cervical cancer in women of Mexican origin and other ethnic groups can be obtained. The data on occurrence of cancer will be correlated with a number of dimensions of socioeconomic status to evaluate the significance of such relationships.

GYNOB CLINIC, SAN DIEGO, CALIF.

8. *Washington, D. C.* (10).—This cervical cancer cytologic investigation unit was organized during 1956. In addition to gathering epidemiological, ethnic, prevalence and incidence data, this unit is charged with investigation of improved methods of sampling, fixing, and staining of vaginal specimens, with development, testing and evaluation of new procedures and equipment. Particular emphasis is being placed on the practicability of using specimens mailed in from remote areas. Specimens obtained from Indian women are examined as a part of a cooperative program with the Division of Indian Health. A second study includes women employees of the National Institutes of Health and other bureaus of the Department of Health, Education, and Welfare, some of whom have been examined a second time. A long-range study of women employees and patients of St. Elizabeths Hospital was initiated in 1957. An additional investigation is being carried out in cooperation with the Federal Reformatory for Women located in Alderson. W. Va. Conditions under which the cytological test is most reliable are being investigated.

Department of Justice, Bureau of Prisons, Federal Reformatory for Women, Alderson, W. Va.
Bureau of Medical Service, Division of Indian Health
International Ladies' Garment Workers' Union, Union Health Center
Employees Health Service, DHEW
Employees Health Service, NIH
St. Elizabeths Hospital, Washington, D. C.

The additional cervical cytology projects just noted have been established in part to meet this need for a large number of screenings, and results from these projects are being pooled in order that reliable data can be obtained. These projects also have different research objectives of their own which cover such fields as relation of socioeconomic status to the occurrence of cervical cancer, industrial and environmental factors possibly related to cancer, the comparison of various methods of securing cytological specimens, examination of women in the age groups below 25 years of age, the practicability of extending the use of the cytologic method to women in rural areas, the relationship between various racial and ethnic groups to occurrence of cancer, and the investigation of the occurrence of cancer in the population under rigidly controlled circumstances.

All of the centers will need to operate at full capacity if sufficient data are to be secured to meet the objectives just outlined.

Investigations to date utilizing the cytologic method for discovery of cervical cancer have led to consideration of the possibility of adapting this technique to detection of cancer of other body sites. To accomplish this requires exploration, research, and development of satisfactory means of collecting specimens which can be subjected to microscopic examination. This is a formidable task which will require considerable time, talent, and resourcefulness since the types of cancer under study will be lung, gastric, and intestinal. None of these sites is readily accessible for acquiring cytologic specimens.

A beginning was made in 1957 in relation to two of these sites—lung and large bowel cancer. A project has been initiated at Houston, Tex. (M. D. Anderson Hospital and Tumor Institute), on lung cancer, and a second project concerning large bowel cancer has been activated at Columbus, Ohio (Ohio State University Medical School). Both of these will be brought to full staffing during 1958. Negotiations are underway currently to establish an additional unit for investigation of application of the cytologic screening technique to early discovery of cancer in the gastric tract.

In addition grants are directed toward research concerned with improvement in cell study techniques and in specimen collection; development and refinement of cytologic procedures to uncover early respiratory, esophageal, gastric, intestinal, renal, breast, bladder, and prostatic cancer; studies in the reliability of prognosis through cytology; studies related to the rate of exfoliation of cancer cells; studies of the incidence and prevalence of cancer of various sites in selected racial groups; and cervical cancer screening projects. There are projects for the latter in Charlotte, N. C., Providence, R. I., and Detroit, Mich.

In all instances the research studies are being conducted either by or with the assistance of university medical schools or national research organizations through the pathology department heads, surgery departments, nursing departments, and any other cooperating medical departments. The overall guidance of the total program comes from the Cytology Section of the FIDB, NCI, which also serves as the central collection area for the research data and the collating agent for the whole program.

Detailed results of the findings of the several research projects established in the study of exfoliative cytology have been or will be published by each project. The overall results will then be correlated and assessed for conclusions concerning the method of exfoliative cytology and the epidemiological factors in cancer of various body sites. Because the large bowel, pulmonary and peripheral blood cytology projects have been in operation less than 1 year no results are available for publication at this time. The overall results of the vaginal cytology projects are summarized in table I.

TABLE I.—*Summary of cytology operations from establishment of projects through Dec. 31, 1957, all projects combined*

Total smears	554,000
Total women tested	303,800
Total women with first annual retesting	73,700

As of December 31, 1957, approximately 304,000 women have been processed for the detection of cervical cancer in the 7 cytology projects. About 554,000 vaginal or cervical smears were taken and processed. Almost 74,000—or about one-fourth—of these women have had a second annual test. Some of these have had more than one annual testing, the total number of annual retestings being 115,000.

The majority of the specimens have been received from private physicians. Sixty-four percent have come from this source. All women at the cytology project at Madison and about three-fourths of the women studied at Columbus and San Diego have been studied through private physicians. Thirty percent of the women were studied in clinics, 4 percent in industry, and 2 percent in institutions (mental hospitals, a tuberculosis sanitarium, and a Federal reformatory for women). These data are summarized in table II.

TABLE II.—*Source of women studied through Dec. 31, 1957, all projects combined*

	Amount	Percent
Private physicians	$193,100	64
Clinics (hospital or mobile)	91,100	30
Industry	12,900	4
Institutions	6,700	2
Total	303,800	100

These percentages will change with the operation of the new project at Philadelphia, which will handle specimens obtained almost exclusively from women in industry, and with the expansion of processing of women from industry at the Washington Cytology Unit. A higher percentage of women will probably be seen in clinics at San Diego than previously.

In order to allow for more complete diagnoses, women tested and observed through October 31, 1957, only, were considered in the preliminary analysis of results of the vaginal and cervical studies. These results are presented in tables III and IV.

TABLE III.—*Results of cytology readings for women studied through Oct. 31, 1957, all projects combined*

Cytology result	Number	Percent
Negative	280,000	98.1
Suspicious or positive	[1] 4,200	1.5
Unsatisfactory	1,300	.4
Total	285,500	100.0

[1] See table IV.

About 286,000 women were studied. The vast majority, 98 percent, had cytology readings that were negative for cervical cancer. Four thousand two hundred women, or 1.5 percent, had cytology smears that were found to be "suspicious" or "positive" and in need of further study.

TABLE IV.—*Results of further study of 4,200*[1] *women with cytology readings "suspicious" or "positive" through Oct. 31, 1957, all projects combined*

	Number	Percent
Confirmed as positive	2,140	51
Not confirmed as positive	1,280	30
Unconfirmed (incomplete)	780	19
Total	4,200	100

[1] See table III above.

Slightly more than one-half of these women—or 2,140—were found to have invasive cancer or intraepithelial carcinoma of the cervix. Almost all of the women with cancer have been or are being treated. Most of the women with intraepithelial carcinoma are under medical supervision or observation. Thirty percent of those with "suspicious" or "positive" cytology have not been confirmed as positive for cancer. These have had some followup but require more confirmative study as cold knife coning of the uterine cervix, a more major procedure than simple cervical biopsy, or dilatation and curettage of the uterus. Slightly less than 20 percent of the cytology readings in this group of women are unconfirmed in the sense that further study is incomplete or pending at this date.

Estimates made of the workload at each of the 7 cytology projects during a fairly typical month in the latter part of 1957 (table V) show that about 11,000 women per month are now given vaginal or cervical cytology tests.

TABLE V.—*Estimated number of individuals studied per month by project* [1]

Columbus	2,500
Louisville	1,850
Madison	1,600
Memphis	2,600
Philadelphia	980
San Diego	600
Washington	[2] 830
Total	10,960

[1] Based on number of patients studied, November 1957.

[2] This project in addition to the listed number of vaginal-cervical slides is studying smears of sputum from the uranium miner study and is evaluating smears on a special vaginal cytology project.

It is anticipated that the workload will increase to about 16,000 examinees per month. In 1958 and also in 1959 between 150,000 and 200,000 women will be processed for cervical cancer at the projects set up by the Field Investigations and Demonstrations Branch, National Cancer Institute.

There is a tremendous shortage of trained personnel (pathologists and cytology technicians) in the entire field of cytology. This is particularly true in respect to the cytology technician. These are individuals, usually young women, who have had sufficient training in the Papanicolaou technique under a pathologist's instruction to examine cytologic preparations microscopically and identify cancer cells. Such an interpretation of specimens requires a considerable amount of judgment and involves a certain degree of responsibility.

It has been extremely difficult to recruit and retain trained cytology technicians because of the exacting type of work involved, and the fact that trained technicians can obtain similar employment outside the Federal service at substantially higher salaries. The situation is complicated further by the fact that the majority of cytology technicians are young women of marriageable age who stay in the field for only a limited period of time.

The Institute is attempting to meet this shortage in a number of ways. An agreement has been approved by the Civil Service Commission which provides special procedures for appointment of interested individuals to trainee positions under the merit system. Trainees are given on-the-job training in the several cytology projects operated by the Institute. This arrangement is aiding somewhat in recruiting for such projects.

A number of pathologists in various centers throughout the country conduct training courses for cytology technicians. Grants are provided to a limited number of these centers to enable them to expand their enrollment beyond their own immediate needs.

In addition, a traineeship program has been instituted recently under which cytology technicians are trained in a number of recognized cytology laboratories throughout the country. Under this program, trainees are awarded stipends at the rate of $225 per month for a maximum period of 6 months. Approximately $40,000 will be allocated for training of an estimated 30 technicians under this program in 1958 and 1959. The training of pathologists needed to supervise cytology technicians is also supported through the grant mechanism. It is estimated that $60,000 will be devoted to training of pathologists in cytology techniques in 1958 and 1959.

Developmental work on an electronic device (Cytoanalyzer) has been in progress for some time. The purpose of this device is to scan and sort cytologic specimens preparatory to their evaluation and pathological interpretation. Currently a medical-engineering team is working on machine improvements and on development of a technique of specimen preparation especially designed for the Cytoanalyzer.

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Cancer cytology program—Distribution of funds

	1956 actual		1957 actual		1958 estimate		1959 estimate	
	Positions	Net cost	Positions	Net cost	Positions	Net cost	Positions	Net cost
Training grants	------	0	------	[1] $62,736	------	[2] $100,000	------	[2] $100,000
Grants for field investigations	------	$423,732	------	943,317	------	900,000	------	900,000
Direct operations	95	349,129	101	691,562	233	1,230,800	233	1,183,800
Total cytology program	95	772,861	101	1,697,615	233	2,230,800	233	2,183,800
Number of direct investigations	------	6	------	9	------	11	------	11

[1] $2,700 for cytology technicians, $60,036 for pathologists.
[2] $40,000 for cytology technicians, $60,000 for pathologists.

GROWING PUBLIC INTEREST IN CANCER

Dr. HELLER. I would like to amplify and emphasize several points which I think will be of interest and concern to the committee.

First of all, we have been impressed with the growing interest and increasing knowledge, both of the lay public and scientists, concerning cancer. This has been gratifying because we believe we are seeing and overcoming a certain apathy and disinclination to consider cancer in the proper framework which would be useful in discussions.

While we have been preoccupied, Mr. Chairman and members of the committee, with some of the applications of knowledge which have been found in the laboratory and in the field, nevertheless, we have become increasingly impressed with the necessity of continuing our work in basic research.

NEED FOR BASIC RESEARCH ON CANCER

Every bit of information which we have now has stemmed from very good basic research.

We, therefore, are not lessening our interest and activity in basic research. On the contrary, we are attempting to support projects of the highest order and of considerable importance in establishing some new facts and new ideas concerning the several areas of cancer research.

Mr. Chairman, the cause of cancer has been a subject which has intrigued scientists for many generations. One might divide cancer-causing agents roughly into three parts: Chemical compounds, physical agents, and viral agents—that is, viruses.

There are several hundred chemical agents which are believed to cause cancer. Work is going forward on these agents in an attempt to elucidate the manner in which they cause cancer, the response of tissue, and other biological characteristics of the group of diseases we call cancer.

Included among the physical agents is radiation. Radiation, we know, is one of the causes of cancer. We know that the several sources of radiation—X-ray, radium, radioactive isotopes, and so forth—are responsible for different cancers.

You may recall a year or so ago I testified as to a study going on in Hagerstown, Md.

Senator HILL. Yes, I recall that.

STUDY ON ENVIRONMENT FACTORS

Dr. HELLER. I am happy to report, Mr. Chairman, that this study is proceeding very well. A philanthropic citizen of Hagerstown made available a very fine laboratory building which is being built especially for this purpose as a part of the Health Department. We have a team of scientists now working in Hagerstown.

The purpose of this study, Mr. Chairman, is to find out if there are environmental factors in and around Hagerstown or in Washington County which may be responsible for cancers or for certain increases in cancers which apparently exist in certain parts of this county. I refer to background radiation, to the presence or absence of certain chemicals in the soil, and so forth and so on.

CHEMICALS IN SOIL

Senator HILL. I am intrigued about what you said. You speak of background radiation and you speak of the absence of certain chemicals in the soil. Amplify that a little bit, the chemicals in the soil, now. I have been preaching that doctrine for a long time, but I am not sure that I have obtained the full import of it. You see, I have what I call, I believe, the six pillars of health. One of these pillars is the soil.

Of course, the illustration that we understand the best is the fact that we have a county in Texas, Deaf Smith County, where you have the fluoride and other minerals in the soil so that you do not have too much concern about tooth decay.

I am intrigued by what you say. Can you amplify it a little bit, please.

Dr. HELLER. Yes, sir. While there has been suspicion that an unusual concentration of background radiation exists in certain parts of this county, this has not been definitely established. However, with the cooperation of the Atomic Energy Commission, with the Geological Survey, Coast and Geodetic Survey, and with the Department of Agriculture and the State Health Department, local health departments, surveys have been made of this county by airplane to establish the exact amount of background radiation.

Senator HILL. That is in the soil?

Dr. HELLER. In the soil; that is correct.

As you may or may not know, Washington County in Maryland is a mountainous county.

Senator HILL. Yes, it is.

DIFFERENCES IN BACKGROUND RADIATION

Dr. HELLER. There are differences in background radiation in the several parts of this county. It is our belief that there may be some correlation between differences in background radiation and the occurrence of cancers in this county.

However, this has not been established as yet.

In addition, and with particular reference to the point you raised, Mr. Chairman, there are differences in the chemical content of the soil in this county in the several parts. We are attempting to find out which elements, chemical elements, are present in unusual quantities or absent, as the case may be, in the several parts of this county, and to correlate such presence or absence with an increase or decrease in cancer.

To date, we have found nothing yet that is significant or strongly suggestive of any factors which might be susceptible of statistical analysis. However, the study is really just underway. We have a soil chemist at work, who works closely with the Department of Agriculture, and this indeed is a very happy experience of cooperation with other agencies of the Government also.

Senator HILL. In other words, you are making use of the knowledge and the experience and the personnel of the Department of Agriculture?

Dr. HELLER. That is correct, sir, and the Atomic Energy Commission, the Coast and Geodetic Survey, and the Geological Survey.

Senator HILL. I see. That is fine.

Dr. HELLER. And the official agencies, as well as the voluntary agencies, have been very helpful.

One interesting thing which you may recall about this county is that the Public Health Service has a long history of working with this county. Records go back as far as 1880, which are important genealogically, since we have the advantage of being able to collect information back that far on deaths.

CIRCULATING CANCER CELLS IN PERIPHERAL BLOOD

One other interesting approach we are making there researchwise, Mr. Chairman, is the study of circulating cancer cells in peripheral blood. Work in Sweden and in this country suggests the possibility that cancer cells break off from the original cancer in the body and

are circulating in the peripheral blood, perhaps significantly, quite a time before they spread under other circumstances.

We are taking patients as they come to the chronic disease hospitals in cooperation with the State health departments and routinely screening these. They have found some rather interesting things, such as some cancer cells in the blood of patients who we did not know had cancer.

In addition, that work is being extended, not only in our own laboratories in Bethesda; but we are undertaking it in cooperation with the Public Health Service hospital in Baltimore and local hospitals. We are proposing consideration of a study group in Baltimore because of accessibility of patients in the Baltimore Public Health Service hospitals and other local hospitals.

Senator HILL. How much of a job is it finding these cancer cells?

Dr. HELLER. It apparently is not too much of a job if one has enough patience and routinely checks every patient with the proper staining and considerable attention to technique. There are particular types of stain which have to be used.

Senator HILL. Do you take from the patient a certain amount of blood as you do for most blood examinations?

Dr. HELLER. That is correct, sir.

Senator HILL. Then you check that blood in the laboratory?

Dr. HELLER. That is correct, sir—smear.

Senator HILL. With a stain smear?

Dr. HELLER. That is correct.

Senator HILL. Then, is there really any reason why one person has what we call a general checkup examination—why his or her physician should not also make that examination along with the other usual or routine examinations; or does this require particular knowledge or special equipment to do it?

Dr. HELLER. This may be all right in time, Mr. Chairman, but at present we have not established that this is a good laboratory procedure or one which is applicable to general examination. However, if our studies bear this out, certainly it will be one of the sort of tests which may be available to the physician. Of course, it will be simplified in time as we learn more and more about this technique.

I mentioned this because we are doing it in Hagerstown, in a rural community, as well as here, there, and elsewhere, in an effort to accelerate the rate at which we are acquiring information concerning this very interesting procedure. It may or may not be significant; but it certainly is worth exploring.

LOCATION OF CANCER IN HUMAN BODY

Senator HILL. Let me ask you this question; perhaps this is the $64,000 question, and maybe you cannot answer it this morning, but if you find the cancer cells in the blood, what is the next step that we note at that time?

Dr. HELLER. The next step is to find where the cancer is in the human body.

Senator HILL. In other words, the fact that these cancer cells show up in the blood is evidence of the fact that somewhere in that body, there is a malignancy of cancer?

Dr. HELLER. That is correct.

Senator HILL. Then, that leads you to that fact, at which time you use all of your resources to find where that malignancy is?

Dr. HELLER. That is correct, sir. It is an extension of cytology, if you please, Mr. Chairman, cytology, or the examination of cells, which is the procedure of detecting cancer cells which have been sloughed off, or we call it exfoliated from cancers in the body orifices. In the same sense these cancer cells are exfoliated from tumors into the blood stream. And if the allegations or the beliefs of some investigators are correct, many cancers slough off cells which are killed by the human body and do not spread at that time. In time the immunological characteristics of the body may be subdued and cancer then spreads to other parts of the body. Whether or not this is correct remains to be established.

Senator HILL. In other words, what you are saying really is that this study that you are making is seeking to get the answers that you are talking about now.

Dr. HELLER. That is correct, sir.

Senator HILL. How long did you say that this study had been going on?

DURATION AND COST OF HAGERSTOWN STUDY

Dr. HELLER. We started it in Hagerstown during the last 3 months. We are carrying on similar studies in Bethesda in our laboratories. We hope to get started with it in the Public Health Service hospital in Baltimore and other local hospitals on July 1. We will move as fast as we can on this study.

Senator HILL. Let me ask you this: When you get this study in full operation, what do you figure it will cost?

Dr. HELLER. It should not be too terribly expensive, Mr. Chairman. We are proposing to carry this along with our regular budget.

Senator HILL. I understand that, but have you any idea about what it would cost?

Dr. HELLER. Not offhand, without having the figures.

Senator HILL. Do not commit yourself. I realize you cannot give me a mathematical answer.

Dr. HELLER. I would say we could do this study for about $100,000 or $150,000 a year.

Senator HILL. This is within the Institute itself?

Dr. HELLER. That is correct, sir.

Senator HILL. The hospital will be a public health service hospital?

Dr. HELLER. Yes, and other hospitals, local hospitals. We need volumes of patients to be sure we have enough.

Senator HILL. You need much clinical material, as well as a variety; is that right?

Dr. HELLER. That is correct.

In addition, Mr. Chairman, there are investigators in other parts of the country who are exploring this mechanism in a similar manner as ourselves, so that the pooling of our information and efforts will be of course advantageous to all of us and accelerate the rate at which we get the answer to this particular study.

WORK FINANCED UNDER GRANTS

Senator HILL. Now you speak of the other work that is being done in correlation with your work. Is that work financed or partially financed from grants that you give?

Dr. HELLER. That is correct, particularly the Roswell Park Institute in New York State, which is perhaps the institution doing the most in this field with the exception of our own National Cancer Institute.

Mr. Chairman, there are some notable, and I think outstanding advantages in cancer research which I mentioned in my opening statement.

NOTABLE ADVANCES AGAINST CANCER

Senator HILL. Excuse me. I will tell you what I would like to have you do. Would you please highlight some of what you feel have been notable steps forward?

I will not even use the word "achievement" because you have not found any achievement, but at least the steps forward, because, you know, there are always "Doubting Thomases" who want to know, if you spend so much money, what have you done and what have we to show for it. So if you could highlight what you feel are the steps forward, and I do not mean by that to limit yourself to the present fiscal year, but all the way back from the day that the Cancer Institute was established by Congress.

Mr. HELLER. All right, Mr. Chairman.

CHEMOTHERAPY

I think one of the steps forward which we have made has been one which I testified to previously, namely, chemotherapy. I am happy to report that the work of National Cancer Institute and the Cancer Institute and the Cancer Chemotherapy Service Center has progressed very well. Notable advances in this current fiscal year have been the establishment of a review board to consider contracts, the entry of industry, the very fine participation of industry in the cancer chemotherapy program in furnishing compounds to us, and contracts for screening and for synthesis and blood development, the spirit of cooperation and helpfulness, indeed is noteworthy.

There are about 165 hospitals participating in the chemotherapy effort on a national basis . There are approximately 40,000 to 45,000 compounds per year being screened through the mechanism which I have described previously. There are about 44 compounds in clinical trial at present. Some 88 to 90 compounds have come out of the screening mechanism of the Cancer Chemotherapy Service Center. There are 15 different clinical groups utilizing about 1,800 to 1,900 patients now in clinical trials with the compounds I mentioned. We are experiencing the utmost cooperation from universities, from other research institutions and from other Federal agencies with which we have been associated.

I think the most notable advance has been the participation and work with industry. To date, there are currently now some 60-odd contracts, industrial and nonindustrial, which have been let, some 20 to 25 more are pending, some few of which are being let currently.

And at the conclusion of this year, all of our funds for chemotherapy will have been used, I think wisely and intelligently and I think also in the interest of the public. In other words, the chemotherapy program has progressed to the point where it has grown up, it is beginning to deliver, as we hoped it would.

WORK WITH METHOTREXATE

One compound which I mentioned last year I would like to report on just briefly.

I refer to the compound methotrexate, which is an antifolic agent, an antivitamin. Folic acid is a vitamin. This compound, which is the old amethopterin—amethopterin has a new name, which is methotrexate, because of the confusion between amethopterin and another closely named compound, aminopterin, which are similar but have different toxicities. This compound has been found to be exceedingly useful in the management of a fairly rare condition called choriocarcinoma. This is a carcinoma of the uterus of women who have just given birth to youngsters. This condition fortunately occurs only 300 to 400 times a year in this country.

Administration of large doses of methotrexate to these women who had a spread of this disease to their lungs and/or to their brains have resulted in marked clinical improvement in most of these individuals.

By a measurement chemically of the chorionic gonadotropin, that is, a substance secreted by cancer cells, it has been possible to determine that we have succeeded depressing down to a normal level, this gonadotropin in the urine and in the blood to a point that suggests the absence of cancer cells secreting the material.

In at least 6 or 8 of these individuals the longest period of observation now has been almost 30 months. These are young women. They had literally only a few weeks to live prior to treatment.

We do not contend this is a cure, Mr. Chairman. We only contend that in the some twenty-odd cases which have been treated to date, and there have been 1 or 2 or 3 failures, the lives of these women have been saved. Whether or not, ultimately, they will die of cancer, is unknown to us. We must observe them for a sufficiently longer period of time to establish whether or not we have a 5-year survivorship, which is the usual and common way of measuring the effectiveness of therapy.

Senator HILL. Whether or not it is a complete specific, so to speak?

Dr. HELLER. I would not say it is a complete specific.

Senator HILL. I said whether or not it is. You have to wait to make that determination.

Senator PASTORE. Where are the cases being treated?

Dr. HELLER. At Bethesda. This happens to be an activity which was established by our group at Bethesda and is carried through there. It has since been extended to the institute in New York, the Roswell Park Institution; also in Buffalo and 1 or 2 other places.

RESULTS OF USE OF METHOTREXATE

Senator PASTORE. What do you expect to accomplish? Do you mean that this secretion from the cells is not getting into the blood stream?

Dr. HELLER. We believe that this drug has perhaps completely suppressed the formation of cancer and eliminated the cancer cells in some of these women. At least in some the secretions of cancer cells are not detectable chemically in the blood and urine.

Now whether or not ultimately they will regrow to the point that they may again begin secreting chorionic gonadotropin, we do not know. Nevertheless, we are watching these patients with these chemical tests, as this is one of the rather precise, refined ways of measuring whether or not activity is present.

Some of these patients who clinically are markedly improved and going about their housework, apparently are clinically well. Some of these patients have higher than normal gonadotropin level in their urine and blood, so we are not sure that this isn't just latent or quiescent stage of the cancer and possibly it may flare up for some reason or other.

It has been our experience so far that most patients with choriocarcinoma respond very well to large doses of methotrexate.

The point, Senator, that I wanted to make, was that since I reported this last year we have treated more patients and the drug continues to be a very useful and worthwhile compound. Whether or not it ultimately will be the answer for this particular kind of disease is not known. However, it has several points of significance, at least to us.

First, it is possible to achieve a partial (clinical) suppression of the disease in the majority of the cases. It may be that what we learn from this particular experience will be very useful to us in the study of other compounds in other cancers, and, naturally, the heartening effects of such an experience are gratifying to all of us in the chemotherapy field.

Senator HILL. Well, I must say you have been careful and I commend you for it. You might have just said, as we know, "We have done this and done that," when maybe the actual facts have not fully proven those things out.

But it does do this, does it not? Does it not give definite hope that your chemical compounds may be the answer—I use that word "may"—to many of these different forms of cancer?

Dr. HELLER. Yes, sir.

Senator HILL. That is what you have been seeking to find out, seeking to establish, if possible, through the chemotherapy program, is that right?

Dr. HELLER. That is correct, sir.

HISTORY OF CHEMOTHERAPY PROGRAM

Senator HILL. In other words, when you started it—when did you start this chemotherapy program?

Dr. HELLER. The program was started about 1952. This start had difficulty getting off the ground due to our lack of experience and we floundered around. In 1954 the program was revitalized and due to the cooperation and understanding of this committee, as well as Congress generally, we think that now we are running pretty well in high gear.

There are about 2 dozen compounds which are useful in the management of cancer available to private physicians who are particu-

larly interested and concerned with the management of far-advanced cancer.

Surgeons are using chemotherapy compounds now to give to the patient at the same time they perform surgery for cancer. This may be an exceedingly important development inasmuch as it may destroy a lot of the cancer cells which may be circulating in the blood or which may be disturbed by the surgeon at the time the operation is taking place. There are those who contend that surgery sometimes causes cancer cells to become separated from the cancer and to circulate in the blood or lymph streams.

CHEMICALS ASSISTING RADIATION APPLICATION

Also, Mr. Chairman, one additional finding has been that certain chemicals seem to cause a cancer to become more sensitive to radiation. We know that some tumors simply are not bothered by radiation at all. They are resistant. It is possible by introducing certain chemicals into the body that the tumor is made more susceptible to radiation. Therefore such a procedure is useful in the management of some cancers.

Mr. Chairman, another advance has been the improved diagnosis through radiology and the treatment of cancers with radiation. I mentioned the use of chemicals to enhance the treatment of cancer by radiation, the advent of multi-million-volt X-ray machines, the radioactive isotopes which have been indeed noteworthy in the management of cancer.

Along with surgery, radiation has been one of the tools that have been used in the treatment of cancers. The rotation of the patient around the X-ray beam or the rotation of the beam around the patient, as the case may be, enables the radiation therapists to concentrate the very powerful X–rays on the cancer cells with a minimum of damage to the normal tissue cells of the body.

For example, if one has a carcinoma of the thyroid, this [indicating] portion of the neck here and the radio therapist desired to bombard that with several thousand roentgens (the unit of radiation), he beams it from only one direction. The tissues immediately surrounding the thyroid will probably be damaged. However, with the beam constantly on the carcinoma and the body rotated around the beam, the X-rays hit the carcinoma with the normal tissues not subjected to the rays to the same degree as the cancer tissues.

In other words, the maximum output to the tumor with the minimum damage to the tissues will be the result. That has been one advance which is believed to be quite useful.

METHOD OF APPLICATION OF HIGH-VOLTAGE RADIATION

Senator PASTORE. Before you go further, how is the body rotated?

Dr. HELLER. The body is rotated usually in a chair, which is much like a barber chair, by an electric motor. The person is rotated with the beam constant. Sometimes a machine rotates around the patient. However, usually the patient rotates around the X-ray source.

The one interesting feature, Senator, is that the radiotherapist or the physicist very carefully makes up a dummy, a phantom, it is called, which is the exact size of the patient's head or the portion of

the body involved. He puts this in the machine, rotates it, and finds exactly how much X-ray will be beamed at a particular spot on this phantom. In this way he knows exactly how much radiation the patient is going to get and under what conditions and so forth.

Almost invariably, the physicist or radiotherapist follows this procedure in use of high radiation machines. The linear accelerators are new machines, three of which we have at Bethesda and are fairly new machines in the treatment of cancer. I noticed in the newspaper that Stanford University was going to build one about a mile long, I believe, at least some enormous distance. As the word "linear" implies, a linear accelerator enables neutrons or electrons to be accelerated along a tube by appropriate means so that at the end of a certain given length of time the electrons are moving near the speed of light. Such force is useful in breaking up other products of radiation or atoms.

COBALT BOMB TREATMENT

The cobalt bomb, a radioactive isotope, has been of great value in the management of cancers. It has been one of the real values in radiation therapy and very popular, as you are well aware, since we have such bombs in different parts of the country now in the several hospitals. In some instances cobalt sources have supplanted radium as a radiation source. It is convenient. It is cheaper. It is easier to work with. Its only disadvantage is, it has a half-life of 5½ years.

The physicist can calculate exactly how much radiation the patient is getting at each treatment.

Senator PASTORE. These patients treated by cobalt bombs—has the treatment been successful?

Dr. HELLER. Yes.

Senator PASTORE. Completely successful?

Dr. HELLER. Only in the sense that some tumors are sensitive to radiation. A cobalt bomb delivers essentially the same sort of radiation that the X-ray does. It is merely a convenient way of getting to the cancer.

Senator PASTORE. And has it cured it?

Dr. HELLER. Yes, some cancers.

Senator PASTORE. Were you able to reach it?

Dr. HELLER. Yes, sir. Some cancers definitely have been cured just as X-rays and radium have cured cancer.

Senator HILL. I think in that connection it would be interesting to have in the record how much contribution any of the institutes of health or cancer institutes made to the development of the cobalt bomb.

INSTITUTE'S WORK WITH AEC

Dr. HELLER. Yes. This is primarily an Atomic Energy Commission contribution, Mr. Chairman.

Senator HILL. Yes. Did you work with them? I would like to know if you had any part in the cobalt bomb. We would like to know that.

Dr. HELLER. Not in the sense, sir, that I have testified to here. Cobalt, when subjected to a reactor pile becomes radioactive with a half-life of 5½ years, is a very constant source. In early days we cooperated with the Atomic Energy Commission in studying the cobalt

bomb and how it might be used; and in the early days cobalt units were in use at the Roosevelt Hospital, the M. D. Anderson in Texas and in several others. They were pioneers along with the Saskatchewan group and studied and worked very carefully. We worked with them in these studies, but did not participate in the sense of the technical development of the bomb.

Senator HILL. You did not participate in the technical development, but you did participate in the application of the bomb to the cancer?

VALUE OF RADIOTHERAPY

Dr. HELLER. That is correct. In general, I would say, that the use of radiation from radioactive cobalt for therapy has enhanced the chances of cures in many cancers.

Some cancers, as I reported earlier, do not respond to radiation at all. Drugs perhaps will render some of these cancers susceptible to radiation therapy.

By the same token, the improvement in X-rays, such as radioactive isotopes, has brought about a better diagnosis of cancer. With the multi-million-volt machines, it is possible to find lesions in the lungs which were obscured by great vessels or bones. The use of radioactive iodine, radioactive phosphorous, radioactive gold, and certain other isotopes, in the treatment of cancer has been worthwhile.

However, radioactive isotopes have been used better as tracers to elucidate the intermediary metabolism of the human body. By studying the disposition of certain chemicals in the body it is possible to understand their ultimate fate in the tissues. In general, the radiation therapy and radiation diagnoses have progressed in the last 5 years in a satisfactory manner. We have not achieved as much in the treatment of cancer with radioactive isotopes as was hoped originally. However, the work has settled down into a very worthwhile procedure.

QUESTION OF FALLOUT

Senator PASTORE. Before you get to that, do you mind if I ask you a question? This question is a little bit broad and may be a little bit apart from the general scope that we are discussing, but lately there have been quite a number of appearances on the part of certain scientists who have come before various committees, particularly with reference to these tests and the amount of strontium 90 as compared with the natural exposure to cosmic rays, and they ventured to make certain speculations that the human body gets more of an exposure due to the natural elements of the sun and cosmic rays than because of strontium 90 that might be concentrated in the atmosphere at the moment because of these tests.

Now, scientifically, what experiments are we conducting in this field and is any of this under the National Institutes of Health?

Dr. HELLER. Yes, sir. Senator Pastore, we have of course been quite interested in this whole question of fallout. As you are well aware, there have been differences in the fallout concentration in various parts of the country. The Atomic Energy Commission, in cooperation with the Public Health Service, have carried on fallout surveys in which samples of the air have been gathered at different points, some 50 or 60 points throughout the United States, Hawaii,

and Alaska and sent to the National Institutes of Health for examination. There have been some very interesting reports, of course, from time to time indicating high fallout, "density," I suppose you might call it, in places such as Salt Lake City, Denver, and other places in the Midwest; however, they extended to the eastern seaboard from time to time. There have not been, however, such high fallout rates as would occasion any grave alarm to us from the standpoint of disease causation insofar as we know it.

We know that the Hiroshima and Nagasaki bombs increased the susceptibility or risk of leukemia. We do not believe there has been even remotely such fallout concentrations as would create grave problems of cancer causation. Much more must be learned before we dare to speak assuredly on this matter.

As for strontium 90, we fear a concentration primarily in the bones. We have been, of course, concerned and interested because of the possibility that bone cancers may result.

However, I am informed that the concentrations of strontium 90 which have been observed have not been of sufficient order of magnitude to occasion alarm insofar as our knowledge goes of the causation of cancer.

The concentration of radiation in the body is cumulative. If one gets one roentgen, it stays there and then if one gets another roentgen there will be a concentration of two roentgens and so forth. We are of course concerned as to how much the human body will get and under what conditions before cancer or other harmful effects of radiation can be observed.

The Atomic Energy Commission has been working with the strontium 90. We have been concerned with strontium 90 also. Nothing of particular significance, as far as my knowledge goes, has emerged. I may not have all the information available to the Atomic Energy Commission; however, I have not been informed of anything that is unusual in regard to this problem.

VIRUSES AS CAUSATIVE AGENCIES

Mr. Chairman, another area which is of particular significance, and I believe of interest to this group, is that of viruses as causative agents of cancers. For the last 50 years, we have known something about viruses, we being the scientists generally.

The first notable advance in viruses could, I think, be ascribed to Dr. Peyton Rous working at the Rockefeller Institute who, in 1910, found a chicken virus which was named the Rous sarcoma.

A year later, a filterable material was recovered from this tumor. Subsequently some virologists and cancer research people have had the opinion, that many cancers in humans may have a virus origin. There has been no evidence to support this to date.

However, there has been evidence in animals that cancers in fowls as well as mice, have been definitely ascribed to viruses.

However, there are 2 or 3 things which lead us to believe that viruses are, and may be, important factors in cancer causation. One is that we know that one of the primary responses to viruses in infected tissue is a multiplication of cells. That has been observed for a number of years. This is, of course, characteristic of cancer. We also know that it is entirely possible for viruses to remain latent

in tissues and to be incited or activated by something, and this certainly could hold or is compatible with the cancer situation where the multiplication of cells comes about for no reason that we know of and may be incited by something—triggered, if you please.

WORK WITH LEUKEMIA MATERIAL

But the most important information which has come about in the last year or last 2 years has been the laboratory work done by Dr. Ludwig Gross of the Veterans' Administration in New York, by the Sloan-Kettering Institute, and by our own group in Bethesda. It has been found that material from leukemia tissue, when injected into day-old mice, will cause leukemia. The filterable material through a stone filter or other filter is free of cells. Therefore, there must be a virus agent as the active principle as reasoned by the virologist.

Dr. Gross contends that these viruses definitely cause cancers in animals. In our own laboratory, Dr. Sarah Stewart of the Cancer Institute and Dr. Bernice Eddy of the Division of Biologics Control, took some of this material and injected it into day-old mice and got parotid tumors. They took some of the material from the parotid tumors and placed it in tissue culture. They then took some of the fluid from the culture, filtered it, and injected it in day-old mice and obtained a multiple array of tumors.

This work has been duplicated and confirmed by others, namely, the Rosewell Park group. It is the belief of many that this phenomenon represents a virus or viruses which are carried through, not in cells, but as viral agents and became responsible for multiple tumors. There are differing tumors as cancer of the breast, cancer of the sarcoma or cancer of the kidney, cancer of the eyelid, cancer of the parotid glands, and so forth.

This work is believed to be very significant and is believed by many to be a breakthrough.

Dr. Charlotte Friend of the Sloan-Kettering Institute in New York has taken material from leukemic mice, prepared a vaccine, and given this vaccine to susceptible strains of mice. She has challenged these mice with a leukemia virus, and has been able to protect 80 percent of these mice against this virus. Therefore, it is believed that a vaccine has been elaborated for these animals against this strain of leukemia.

As in the instance of poliomyelitis and influenza, once we know the virus agent has been determined, isolated, and identified, it is not too fantastic to conceive there may in time be a vaccine elaborated. We are not saying that we have such a vaccine. We are not even saying that viruses are responsible for human cancer. The evidence is strongly suggestive that this may be the case in some cancers.

Work in viruses is going afoot, it is going apace. We are accelerating the activity at Bethesda, including work on the outside, from which we hope for some of the answers to some of these problems which have been brought in focus by this recent work.

STATEMENT ON VIRUSES AND CANCER

I have here a background statement on viruses and cancer which I could submit for inclusion in the record which outlines some of the

steps in research in this field, if you care to have such a statement inserted.

Senator HILL. That statement will be made a part of the record at this point.

(The statement referred to follows:)

BACKGROUND STATEMENT ON VIRUSES AND CANCER

Viruses are usually thought of as agents that produce infectious disease. For many years, however, scientists have postulated that viruses might also play a part in the causation of cancers.

It is known, in support of this concept, that one of the primary responses of infected tissues in virus diseases is abnormal multiplication of cells. This condition is fundamental to cancer.

Virologists have also recognized for years that there are viruses which remain in the cells without causing any damage until some stimulus leads to their multiplication. This latent effect is characteristic of certain experimental cancers and has also lent support to the cancer virus theory.

Above all, however, is the gradually accumulating and now extensive evidence of cancers in animals which can be transmitted by innoculation of cell-free filtrates made from tumor material.

About 50 years ago, Dr. Peyton Rous, of the Rockefeller Institute, described a transplantable fowl cancer, which became known as the Rous sarcoma. The filterable agent that was separable from the humor and capable of transmitting it is now commonly known as the Rous sarcoma virus.

In the years since this discovery, other viruses causing cancers in chickens, pheasants, ducks, and other fowl, and in mice, frogs, rabbits, deer, and other animals have been discovered. Today, despite the generally accepted belief that certain tumors in animals and plants are virus induced, there is still little evidence that cancer in man is associated with viruses. Yet the idea that viruses cause human cancer is growing. The outstanding virologist, Dr. Wendell M. Stanley, of the University of California, said recently, "* * * the time has come when we should assume that viruses are responsible for most, if not all, kinds of cancer, including cancer in man, and design and execute our experiments accordingly."

Research on cancer viruses has increased within the last few years. Results by scientists at the National Cancer Institute, scientists working under grants from NCI, and other research workers have produced much new information which has intensified the interest in viruses as possible cancer-inducing agents in man.

Some of the recent research findings are summarized in the paragraphs below.

Dr. Ludwik Gross, Veterans' Administration hospital, New York City, reported that mouse leukemia can be transmitted by cell-free extracts inoculated into new-born mice of susceptible strains. Because the agent could be recovered from the leukemic tissue and serially transmitted from one host to another, he concluded that the mouse leukemia was caused by a specific filterable virus. Dr. Gross also observed some other types of tumors in these mice (1).

Scientists of the National Cancer Institute and the Division of Biologics Standards have collaborated in studies of an agent that produces multiple tumors in mice. Drs. Sarah E. Stewart and Bernice E. Eddy have found that the cancers were produced by injecting the test animals with cell-free extracts from tissue culture preparations of mouse salivary gland tumors or spontaneous mouse leukemia. All mice that developed such cancers had primary salivary gland tumors, and some also developed tumors of the thymus, adrenal glands, and mammary glands. In the most recent report of this research, the NIH scientists disclosed that the agent has biological and physical properties of viruses (2).

Dr. W. Ray Bryan and his colleagues at NCI have discovered an important fact that distinguishes the Rous sarcoma virus from ordinary, infectious viruses. These scientists have found that the properties of the Rous sarcomas are directly related to the dose of virus used to produce them. "Biological manifestations" of the cancerous reaction, such as incidence of tumors, rate of growth of tumors, and amount of virus recoverable from the tumor tissue, were measured. All the measured criteria were found to be related to the amount of virus injected into animals. These findings have led Dr. Bryan to conclude that the Rous sarcoma virus is the direct cause of the cancer and not merely the agent that acts indirectly by "triggering" some inherent characteristic within the host (3).

An NCI grantee, Dr. Charlotte Friend, Sloan-Kettering Institute for Cancer Research, New York City, discovered a virus that consistently caused a leukemia-like disease in mice regardless of their age or sex. Previously reported viruses that may cause mouse leukemia induced the disease only if inoculated into newborn mice; several months later the mice developed leukemia. Mice infected with this new virus manifested the first signs of the disease 14 to 21 days after inoculation. In a later report, Dr. Friend disclosed the development of a vaccine against this particular virus-caused disease. When mice were given a series of three injections of vaccine at weekly intervals, and then given live virus, about 80 percent of the animals proved to be immune (4). Thus with this particular viral tumor the principles which have proved useful in developing vaccines against other viral diseases (influenza and poliomyelitis, etc.) have been applicable.

Further studies on transmission of leukemia in mice have been reported by another group of NCI grantees, Drs. Steven O. Schwartz and Harold M. Schoolman, Hektoen Institute, Chicago. They reported that a single inoculation of a cell-free filtrate from brains of leukemic mice or from patients with leukemia induced leukemia in adult AKR mice (5). Among mice of this inbred strain, 90 percent develop leukemia spontaneously.

NCI grantee, Dr. Leon Dmochowski, M. D. Anderson Hospital, recently described "the first tangible evidence" of virus in association with human leukemia before an international conference, Perspectives in Virology in New York City. He reported on three cases of acute lymphocytic leukemia, in which the determination of viral particles had been made through comparatively new procedures. These involved ultrathin sectioning and use of electron microscopy. "Most stimulating for the possibilities of extending the tumor virus problem to conditions in man has been the demonstration of virus particles in the lymph nodes in human lymphocytic leukemia. The cellular changes were quite similar to those evident in mouse leukemia. Virus particles were seen in profusion outside the cells and in the cell cytoplasm" (6). The next step, eagerly looked for, is to determine whether these presumed virus particles can be cultivated in tissue culture or some other medium and whether they are causally related to the leukemic condition.

As these few summaries show, more and more viruses are being identified as causative agents in tumors. More knowledge of the nature of some tumor viruses and host-virus relationships is being accumulated. If research along these lines shows beyond question that some forms of human cancer are caused by viruses, it may then be possible to develop anticancer vaccines.

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(4) Proc. Amer. Assoc. Cancer Res. 2, No. 3, 204 (March 1957).
(5) Proc. Third National Cancer Conference, 345–349, Lippincott Co., Phila. (1957); Blood XII, No. 8, 694–700 (Aug. 1957).
(6) Texas Reports on Biology and Medicine 15, No. 3, 704–753 (Fall 1957).

Dr. HELLER. A gentleman working in Minneapolis has found that when he injects material from the human brain with leukemia into a strain of mice that leukemia will result in these animals. This has not been confirmed and is not an invariable procedure with human tissue, as I understand; however, it is suggestive again of a step in the direction in which there may be material from human leukemia which can be injected and found to cause cancers and lead toward the possible production of vaccines.

IMMUNITY MECHANISM

There are some increasing evidences also of an immune mechanism to cancer. In one experiment by Sloan Kettering investigators at a penitentiary some cancer material was taken and transplanted in the forearms of patients with cancers and some without cancer. In the

instance of those individuals with cancer, the transplants would live for a considerable length of time. In the instance of individuals who presumably did not have cancer, the individual very promptly rejected the cancer tissue.

Upon the reimplantation of tissue to such an individual, he rejected the implantation much more quickly than he did originally.

Senator HILL. Indicating that Mother Nature in that individual had called for its army to lick that first injection and that army that was there could more quickly lick it when he had the second transplant; is that right?

Dr. HELLER. That is the inference that might be drawn, at least by some.

Senator HILL. One reason I asked that is you recall some 2 or 3 years ago we had quite a bit of testimony from Dr. Rhodes, of the Sloan Kettering Institute, on this matter of antibodies and things of that character.

Dr. HELLER. Yes.

We think, therefore, for the reasons that I have set forth, Mr. Chairman, that in viruses we are certainly in a worthwhile area. We have gone so far as to call it a probable breakthrough. Only time will tell.

I can assure you we are going to work harder than ever to elucidate some of these very puzzling findings. We are going to support work as well as undertake it at our own place to see if we can find out the answer to the riddle as quickly as humanly possible. I do not know how long it will take, maybe 7 years or maybe a decade, but at least we are on an existing trail and the dogs are barking in great style, and I think that we may get some very exciting game here.

PROGRESS IN CYTOLOGY

Now one additional advance, Mr. Chairman, which I would like to mention to you, in line with bringing you up to date, and also to indicate our progress, has been that in cytology. We have reported to you our advances in cytology for the last several years. I am happy to say that we are now also going full blast in this program. The information we have derived from the studies in Memphis for example is indeed very interesting, although it has brought additional problems to us.

STUDIES ON INVASIVE CARCINOMA

One interesting advancement from the public-health viewpoint is worthy of mention. We found that it is worthwhile to do a survey of cervical cancer for the findings on invasive carcinoma alone. We are not completely sure yet about so-called in situ cervical carcinoma. We do not yet know what the length of time is from the onset of such a condition until it becomes invasive.

This is one of the research problems which must be elucidated and which we hope will so be clarified in the next few years. We have 10 cytology centers in operation now. They are going along very well. We will have, in time, a million individuals in our study group who will give us considerable research information.

In addition, Mr. Chairman, and gentlemen, we figure that there are about 3 million women a year now receiving examinations by the cytological method at least once a year. This number is increasing

since there are about 50 or 60 million women in the United States and it is going to take a good bit of time before all will have tests for cervical cancer, but we are working toward that end in, I think, an orderly, rational, logical fashion, working with pathologists, with other professional groups, and with health departments. We are meeting with all interested groups from time to time to establish rational programs for the application of what we have learned to date.

CANCER CONTROL UNIT

I am happy to say that there has been set up in the Bureau of State Services a Cancer Control Unit under the leadership of Dr. Louis Robbins, which looks to the Cancer Institute as a focal point. This unit is now working closely with the National Cancer Institute setting up programs or, I should say, expanding programs in State and local health departments and working closely with the American Cancer Society and other interested agencies; and we now have a mechanism which is an improvement on anything we had previously. It enables us to project quickly what we have learned in the laboratory to the field. Such a mechanism will enable us, for example to place quickly the test for cancer cells in the peripheral blood in the hands of the practicing physician and others for diagnostic purposes.

Mr. Chairman, there are many other items, of course, which represent progress. There are many interesting laboratory and other advances, which, while apparently not in the immediate area of applicability, are important.

WORK WITH HORMONES

We have, of course, been carrying on work with hormones in the chemotherapy agent area. There are about 30 compounds now in clinical trials. Only one to date has been at all promising, but of course this is part of the general chemotherapy approach.

Senator HILL. Is that the one used in the prostatic cancer?

Dr. HELLER. I believe it is used in prostatic and breast cancer, but as yet has not been significantly better than some of the hormones. We have been attempting to explore other areas of diagnosis of cancer in addition to cytology and while nothing has emerged yet as a test for systemic cancer, we hope sometime that there will be such a test available. There have been several which have been advanced, such as the Penn test in California, and other name tests elsewhere.

However, work in cancer diagnosis is continuing and we hope that in time there will be some worthwhile advances which can be reported to you.

Senator STENNIS (acting chairman). Doctor, the Chairman wants you to proceed. He will be back in a short time.

Dr. HELLER. Yes.

ANTIBIOTIC AGENTS

One item which I did not mention in connection with the chemotherapy program had to do with the interesting and exciting possibilities in the antibiotic field.

Many of the major pharmaceutical or major houses that are engaged in the preparation and development of antibiotic agents, have cooperated with the National Cancer Institute and Cancer Chemotherapy

Service Center in making available their antibiotic beers, which is a crude soup. It is an expensive and laborious process to refine and crystalize these beers to the point that a crystalline product emerges which can be used for test purposes.

Now about one in a hundred of the beers was found to be effective as an antitumor agent in animals through our test system. Now when this is contrasted with one in a thousand of chemical compounds, one can readily see that is an exciting and worthwhile approach. We believe that some new antibiotic compounds which would be useful in the management of cancer will emerge from this mechanism.

For example, there is an antibiotic called DON which has been useful in the treatment of cancer and we hope that some of these antibiotics will be useful as antitumor agents perhaps, in conjunction with other chemical agents.

There is one little item which Dr. Shannon has just reminded me of and it has to do with radiation, Senator Pastore, which, in view of your questioning, you may find intriguing.

HAIR ROOTS INDEX OF BODY RADIATION

One of the scientists of the National Cancer Institute, Dr. Eugene Van Scott, has found that by an examination of the root of the human hair one will get some indication of the total amount of body radiation which an individual has had by observing the degenerative changes in the hair root. One can establish a crude correlation between the amount of total body radiation and damage to the hair root by that method.

Now the Atomic Energy Commission is interested in this finding and has asked that it be explored additionally and of course we expect to cooperate and collaborate with them. We do not contend, and Dr. Eugene Van Scott does not suggest, that this is a measure for measing radiation damage. It is suggested however as a supplementary method of determining the amount of total body radiation and in conjunction with other methods, it certainly should be useful. It is a quick, inexpensive, painless way of finding out radiation damage.

In this and other ways we are beginning to close in upon the effects of radiation, and of course efforts are being made by us and by the Atomic Energy Commission and others to find compounds which will protect the body against the effects of ionizing radiation. Such things as ground bone, bone marrow introduced intravenously, such procedures as lowering the oxygen tension within the body, by giving certain other chemicals which might protect, at least momentarily, the body against radiation.

In time there may emerge some useful device that will protect, say, a pilot in an airplane who has been subjected to radiation.

Senator PASTORE. Do I understand you to say that the damage to the hair root because of radiation would be symbolic of what the damage is to the rest of the body?

Dr. HELLER. That is suggested.

Dr. SHANNON. Or exposure of the rest of the body. In other words, when one does a population survey in order to determine the extent of exposure of the individuals contained within the group, this conceivably might be a way of doing it.

Senator PASTORE. But the point I make is, if the hair root is damaged because of radiation, it is likely that the other parts of the body might just as well be damaged, too?

Dr. HELLER. Yes.

Now I will be glad to proceed, if you wish; however, on the other hand, if you have additional questions, I will be happy to answer them.

There are other advances I can indicate to you, if you desire; but I will be guided by your wishes.

Senator STENNIS. Senator Pastore, do you have any questions?

Senator PASTORE. No.

Senator STENNIS. We want you to proceed in your own way, but Senator Hill does have some written questions he wanted you to cover in the record. I will read these off now and then you can judge whether you want to take them up now or cover them later.

AMOUNT NEEDED FOR CONTINUATION GRANTS

The first question is this: What amount is required for continuation grants for fiscal 1959? Now if you do not have those figures readily available you can handle that later.

Dr. HELLER. It is something above $17 million, Senator Stennis. That is $17,023,189. Then for continuation of grants which do not at present have moral commitment but which probably will be approved and should be supported, $475,000.

Senator STENNIS. That is in addition to the $17 million?

Dr. HELLER. That is correct. So we have approximately $17½ million that will be needed when we add to it those grants which do not have moral commitment, but which probably will be recommended.

AMOUNT REQUIRED TO ACTIVATE NEW PROJECTS

Senator STENNIS. The next question is this: in fiscal year 1958 how many new projects were approved for payment and how much money was required to activate all of these approved projects?

Dr. HELLER. Senator Stennis, there were 409 new projects which were recommended favorably for a total of $6,507,446.

Senator STENNIS. When you say 409 projects, that means scattered throughout all of your laboratories and colleges or what places are those?

Dr. HELLER. Projects which have come in from all parts of the country, sir, including chemotherapy. It has nothing to do with Bethesda.

Senator STENNIS. That is outside of Bethesda.

Dr. HELLER. Yes, support of research in outside institutions.

Senator STENNIS. Now for fiscal year 1959 do you anticipate there will be at least the same level requested as approved for the past year?

Dr. HELLER. Yes, sir.

Senator STENNIS. Now the next question is this: I note that the budget request before us for research project grants for the Cancer Institute is $21,059,000, but the figures you have given show it requires a shade more than $24 million, just to pay continuation grants and maintain the 1958 rate of support to new projects. Now is this correct?

Dr. HELLER. That is correct, sir, $24,500,000.

Senator STENNIS. Now, Doctor, all of your testimony is very interesting to me. I am sure it is to Senator Pastore. You just proceed with your additional points here.

Dr. SHANNON. Can I clarify one point for Senator Pastore, because I do not want the record to show that hair damage was indicative of comparable damage elsewhere. I believe Dr. Van Scott's observations importantly indicate that at this site in the body there are unique sensitivities so that it can be used as a recorder of exposure rather than as a measure of damage. I just wanted to straighten that out.

Senator STENNIS. All right, Dr. Heller, proceed.

WORK ON RETINOBLASTOMA

Dr. HELLER. Senator Stennis and Senator Pastore, and gentlemen, one additional item to which mention was made by me in previous years had to do with a very interesting cancer called retinoblastoma. This cancer occurs in the eyes of children. It is an inherited defect. Retinoblastoma has been a real tragedy in many families. Due to a very interesting combination of radiation and drugs, it has been possible, in the hands of competent, interested, dedicated people, to save a substantial percent of the eyes of children suffering from retinoblastoma.

Now, apparently, this treatment is effective in the sense that it arrests the cancer which no longer continues to progress and cause ultimate destruction to the individual. One eye may be completely eliminated by the disease, but almost always prompt treatment saves the other eye, according to the reports we have had. Much of this work has been done in New York and has spread to other parts of the country. Such progress is of great interest to all of us because of the tragedy which always ensues from cancer in children.

RADIATION AND CHEMOTHERAPY COMBINATION

We, especially, are interested in the combination of radiation and chemicals. As I mentioned previously, the surgeons are now using chemicals at the same time as they are operating on an individual and they believe that although not fully demonstrated yet such a combination is going to cause a more favorable outlook as reflected in the decrease in mortality and increase in survivorship of individuals with cancer.

Senator STENNIS. You say this is inherited?

Mr. HELLER. Yes, sir, or the predisposition to it is inherited, not actually inherited.

Dr. VAN SLYKE. I think, Senator, we should call to your attention the fact of the economic advantages, not merely the humanitarian, of keeping people alive, not only keeping them alive, but with their eyesight, so that I think we save a lot of money just in this one instance alone.

Senator STENNIS. Yes. All right, Dr. Heller; you may continue.

RESULTS OF TRAINING GRANTS

Dr. HELLER. Thank you, Senator. One of the reasons I think that we have been able to move along very well has been the opportunity for training scientists throughout the Nation, not only in research, but in clinical activities as well. Their abilities as surgeons, pathologists, radiologists, and in other specialties are improved. Our training programs began when the Cancer Institute started in a modest fashion.

Subsequently, the Congress made possible an expansion and extension of training programs; and, about 10 years ago, it became possible to improve the teaching of cancer in medical, dental, and osteopathic schools. I am happy to report this program has also proceeded very well. The medical schools have reported this is indeed an important component in their teaching. Over a period of 10 years they have grown to depend on it, and the grant has made it possible for them to do some things in medical teaching which otherwise they would not have been able to do with their existing resources.

METHOD OF DISTRIBUTION OF FUNDS

Senator PASTORE. I have a question to ask at that point. How is this money distributed? Is it by way of contract, or how do you distribute it?

Dr. HELLER. No, sir. It is made through grants to the medical, dental, or osteopathic schools upon application and is not to exceed $25,000.

Senator PASTORE. It is not to exceed $25,000?

Dr. HELLER. That is right. In the instance of all dental schools, and 2-year medical schools, the grant does not exceed $5,000. It is a modest sum and yet they have used it, I think, very wisely. It has indeed served as a pump-priming mechanism in medical schools to enable them to get full-time persons who are preoccupied with cancer or problems in cancer. It has enabled them to stimulate young medical students along with our postsophomore traineeships or fellowships program, to become interested in scientistic research and investigation and indeed we think the grants have been a real advantage and advance.

The other Institutes, as you perhaps are aware—Mental, Heart, and others—have similar programs which provide funds for the improvement of the teaching of the specialty categories in the medical schools. This is, we think, a very good move and I believe the Congress was very wise indeed in projecting this sort of opportunity and enabling us further to improve the teaching in the medical schools.

FELLOWSHIP PROGRAMS

The traineeships, the program designed to improve the quality of care of patients (and incidentally the majority of these individual teachers run free clinics or otherwise give service to the individual) has been a very worthwhile program, too.

About 150 such traineeships exist. Approximately one-third of them complete their training each year, since each trainee usually completes a 3-year program. We have sent questionnaires to these individuals as to what has happened to them in their professional advancement; and at least 80 to 85 percent of them are affiliated with medical

schools or teaching institutions and discharging their obligations to the community or society by running cancer clinics, diagnostic clinics, or otherwise participating in cancer activities including teaching.

The fellowship program, which is administered primarily through NIH, and which has been mentioned previously by Dr. Shannon, has contributed significantly to basic research in cancer and has enabled us to make some of the advances which I have mentioned concerning direct aids to the cancer patient.

FURTHER STUDIES ON VIRUSES

I believe I mentioned previously the vaccine for protecting animals against viruses and against tumors.

Senator STENNIS. May I ask you this: I get the idea you definitely are very hopeful of these developments?

Dr. HELLER. Yes, sir, I am, Senator Stennis. I am hopeful in the sense that I believe that some of these days we are going to see some additional important advances to the point that there will be much more practical application of what we have learned in the laboratory and at the bedside.

I would like to complete the report I made to you in previous years concerning the use of viruses and the treatment of tumors. You may recall a year or so ago I reported to you that scientists of the Cancer Institute and of the Allergy and Infectious Diseases Institute had taken some common viruses, the ACP virus, and injected it directly into the artery which goes to the tumor or directly into the tumor. In some thirty-odd instances this virus material literally blasted a hole in the surface of the cancer of the cervix. Now this is fine, but the human body has a mechanism whereby the antibodies or immune responses are apparent within a matter of 2 or 3 weeks and the body will therefore not allow viruses to remain effective.

We, of course, have been interested and concerned in this treatment approach. We have used certain other virus agents which do not so similarly act. However, we hope that we can concentrate this ACP virus to a greater extent so that it will eliminate such a tumor.

It may well be that the tumors which we have studied thus far have been of such an advanced stage that the individual was almost overwhelmed with the tumor. It is difficult for the virus to overwhelm such an advanced tumor. It may be that in a smaller tumor treated with a greater amount of virus, one may expect a greater degree of damage to the tumor. Such research is worthwhile doing, we think, and we hope this work can be extended in the future.

Senator STENNIS. You have made a very interesting statement. I imagine this whole statement was put in the record to start with?

Dr. HELLER. Yes, sir.

Senator STENNIS. And you have been commenting from it?

Dr. HELLER. Yes, sir.

I would be happy to answer any questions you may have, Senator Stennis.

Senator STENNIS. Senator Pastore, do you have any additional questions you would like to ask?

PAYMENT OF FULL INDIRECT COSTS

Senator PASTORE. I notice that under the category of National Institutes of Health that in practically every case with the exception of one in the first column, that the House increased them?

Dr. HELLER. Yes.

Senator PASTORE. That is a very indicative point as to the intent of Congress with relation to the development of these research programs for public health.

Dr. SHANNON. Senator Pastore, in our initial discussion of the overall budget with Senator Hill on the first day of the hearings, we pointed out that the House had increased the budget by a total sum of $8.2 million, but had excluded the possibility of paying what is called full indirect costs of research. We requested the committee to consider very seriously the possibility of removing this limitation perhaps in the conference with the House to permit us to utilize a good portion of the increases that you provide for full indirect costs. We feel that medical schools and universities that are producing our scientists and wherein a good part of the research is done are at the point of instability in terms of the program of the institution itself. This is probably one of the more important things that has to be done in order to maintain and develop a strong research base in this country.

Senator PASTORE. Would that require an overall increase in the appropriation?

Dr. SHANNON. No, sir. This can be done with the increase of $8.2 million which was given by the House.

Senator PASTORE. Would that not curtail in any way the research element of the program?

Dr. SHANNON. This would, sir.

Senator PASTORE. But you feel that the other would counteract it?

Dr. SHANNON. Yes. This is our conviction.

Dr. HELLER. Senator Stennis, there are 1 or 2 other items which I would like to mention here, if I have the time?

Senator STENNIS. Yes, you have plenty of time.

RESEARCH ON ENVIRONMENTAL FACTORS

Dr. HELLER. There are 1 or 2 rather isolated examples of research which I think should be brought to the attention of the committee. One is the interest which the Cancer Institute, and in fact the people working in cancer throughout the country, have in the study of environment. Such things as plastics, for example, have been suspect. One investigator supported by the Cancer Institute has inserted certain plastic film in the tissues of certain animals, and found that if he leaves them longer than 6 months precancerous lesions can be observed in this tissue. The critical period seems to be about 6 months. Under 6 months, no precancerous changes are observed. If left there frank cancers are likely to occur.

The people who are working with orthopedic appliances where metals or plastic materials are inserted into the tissues of the body for such things as artificial joints or for cosmetic purposes and whatnot, are concerned over the possibility that the materials which they use may be cancer producing.

We have been preoccupied and interested in this possibility and are supporting work. We have been cooperative with the Food and Drug Administration in other phases of environmental cancer. I report to them very promptly any information which we get and which we think is important.

There are some, as I reported earlier, three or four hundred compounds which are incriminated as cancer producing. Many of them fall into a grouping called polycyclic hydrocarbons. That is, they are members of a chemical grouping which has several benzene rings. An example of this would be some of the petroleum products and some of the coal-tar products. We are studying some of these compounds as to the possibility of their causing cancer when they come in contact with individuals.

Some of the work that we propose to undertake at Hagerstown will embrace this particular activity.

GEOGRAPHIC PATHOLOGY

We have found, through field studies, that Jewish women have only one-fourth as much cervical cancer as do gentile women. These studies in New York hospitals and in hospitals in Israel confirm the view which has been held by physicians and scientists for many years. Why should this be, we do not know. Whether it is a reflection of heredity or of religious practice, we do not know.

EPIDEMIOLOGIC INVESTIGATIONS

Similarly, we are undertaking epidemiologic investigations of other differences in the occurrences of disease.

For example, it has been stated, and it is fairly well confirmed, that Japanese women have little breast cancer. We do not know why this should be. It does not seem to be a reflection of the fact that Japanese usually nurse their babies at the breast. However, this phenomenon is being studied and it would be a rather simple matter if we found it critical to advocate for purposes of prevention of breast cancer that women nurse their babies.

However, this possibility has not been established.

We are closing in on a situation which is called geographic pathology. This means epidemiology, or, in other words, the occurrence of cancer in differing degrees in various parts of the world.

For example, the primary cancer with which the South Africans are concerned is a primary carcinoma of the liver. It is a condition rarely seen here. We do not know why this should be.

Similarly, cancer of the tongue is very prevalent in certain parts of India and, while cancer of the tongue is not necessarily rare here, it is much less prevalent in the United States by a factor of 3 or 4 than it is in India.

England has about twice as much lung cancer as we do in this country; so does Austria. Why this should be, we do not know.

The occurrence of stomach cancer in Mexico is about twice that of this country. Stomach cancer, interestingly enough, is going down very rapidly in occurrence as a cause of death in this country, about a third in the last 10 years. At the rate it is going down, some of these days, cancer of the stomach will not be a problem of any great mag-

nitude from a public health viewpoint or from the standpoint of causation of death.

Cancer of the lung, on the other hand, appears to be going up rapidly both in men and women.

Geographic pathology, or the occurrence of cancer or of any other disease, in different parts of the world is an intriguing and worthwhile study. We have, for example, studied the possibility of trying to confirm the stated fact that schistosomiasis, a tropical disease, is the cause of bladder cancer.

We sent an officer to Egypt to work with the naval research group in an attempt to find out whether or not this is the case. Unfortunately, the Suez crisis occurred about that time and interfered with the work, but preliminary data would suggest there is some correlation between the occurrence of bladder cancer and the presence of this particular parasite in the human bladder.

We are hopeful of working more than at present with foreign nations with regard to geographical pathology of cancer.

This may be true with heart and mental health and certain other conditions as well. We hope that in the next few years there will be an expansion of our international work.

For example, it may be interesting to you that the National Chemotherapy Service Center is screening compounds from Russia, Germany, Scandinavia, France, England, and Africa and other parts of the world. We can see cancer as a disease which transcends international boundaries.

WORK OUTSIDE THE UNITED STATES

Senator STENNIS. May I interrupt you right there? You said you sent a man to Egypt. Do you send men to several places and if so, please indicate where you have sent them. I think that is of political importance, as well as medical.

Dr. HELLER. If a problem seems to be acute enough, Senator, and the time seems to be right or propitious for finding information that we are after, we do not hesitate to send such an individual to a particular locality to seek the data we wish.

Senator STENNIS. Does he take part in the research that is going on there?

Dr. HELLER. Yes, sir. We are attempting, Senator, to expand our horizons internationally, with a very selfish viewpoint, that is, to find out the things which are of value to the American people, and we do not care where we get the information.

If we get it here, fine; but if that information is available elsewhere, we attempt to be alert to obtain such information wherever it may be so that it can be applied quickly to our own purposes in this country.

Senator STENNIS. I highly commend what you are doing and also I have hopes of better international understanding coming through doors like that far more hopefully than through political channels.

Dr. HELLER. We found our scientists to be very cooperative and to be very interested. There is a common denominator of interest and sympathy with regard to scientific findings. Dr. Shannon can speak much more vigorously to that point because his is the broader scope.

EXPANSION OF FELLOWSHIP PROGRAM OUTSIDE UNITED STATES

Dr. SHANNON. Senator, you may be interested in hearing about a fellowship program that has been initiated this year. For the first time since 1950, we are extending our fellowship program opportunity to a limited number of very superior people from outside of our own borders. April 24, I believe, Dr. Burney will announce the awarding of the first 12 of these fellowships to individuals, selected because of their special excellence, from West Germany, France, England, Switzerland, and Denmark. These individuals are selected by the national bodies or selected for purposes of nomination to these fellowships by the national scientific body of the country. They compete amongst themselves and with our own people. We feel that we have much to gain from the acceptance of a limited number of them. This program, through these fellowships, will make available to us the attitudes, the thoughts, the habits, and the minds in the research areas of excellence in other parts of the world and, in turn, will expose a limited number of very superior young foreign scientists to the United States. They will then see the United States as it is rather than as it is perceived through the international press.

We discussed this program at some length last year, you may recall, Senator Pastore, and it just so happens that tomorrow the first group of these will be announced. I would emphasize that, apart from the scientific benefits which will accrue, which will be very significant and adequate justification for the program itself, there are other benefits that may well go beyond the scientific benefits.

Senator STENNIS. Well, I think your comment is very timely. I remember President Eisenhower, in his state of the Union message, I believe it was in January, mentioned something of the possibility of cancer research in international relations and it is surprising that the President did not give more attention to that reference because it is a great field of opportunity that is there.

COOPERATION WITH FOREIGN COUNTRIES

I want to ask you this: Do you get cooperation from these other countries wherever they may be? Are they willing to assist?

Dr. SHANNON. Yes, sir. We are very well received. This activity involves the selection of these individuals by the top scientific group of each nation. That might be the equivalent of our National Research Council or our National Academy of Science. Individuals at such a level do the selection. The applications are all excellent. They are very thoughtful.

Senator STENNIS. I mean when you send some of our men out to take part in research or to observe research in other countries, as Dr. Heller mentioned, such as sending a man to Egypt, are they ordinarily properly received and do they have cooperation?

Dr. SHANNON. Yes, sir; they are received very well. I might say we have a small field station in the Isthmus of Panama. This unit is studying some of the problems involving Central America. This was established on a trial basis beginning February of this year.

In the past we have had scientists in Liberia, South Africa, Guatemala, and other places. As part of our normal fellowship program, we send approximately 20 or 25 of our brighter scientists for training

periods abroad. These are not our own employees, but individuals who compete for these fellowships from the medical schools and universities across the land.

I think we have made a very real start. We have a very solid accomplishment behind us on these international programs.

It would be our hope, in accordance with the wishes expressed by President Eisenhower that these programs can expand and can expand sizably along the present lines. The stakes are really great. I might add I traveled in Europe the last couple of summers and I am convinced that American science, or America itself is not too well understood by some of the more advanced young thinkers.

I think that we have to back this program up beginning in a very positive way. It should be expanded to other countries.

LIAISON WITH RUSSIA

Senator PASTORE. Do we have any liaison with Russia on this?

Dr. SHANNON. No, sir, we do not.

We do have liaison with Russia through the exchange of small missions. We have recommended to Secretary Folsom that the exchange of missions as such will probably not accomplish the purposes as we see them. The missions stay too short a period of time and operate in too restricted an area and under too many formalities for individuals to obtain a real understanding of the United States or we, for that matter, to obtain a real understanding of Russia.

We have recommended a program of international medical research. Such a program would encompass a real exchange with the Russians, Russian scientists.

Senator STENNIS. That is over a long period of time?

Dr. SHANNON. Yes, sir. We feel that this would be much more profitable than a simple exchange of missions. These are important in themselves. I do not mean to minimize their importance. They cannot substitute for the exchange of ideas and the like, on a man-to-man basis over an extended period of time.

Senator PASTORE. What kind of missions have we exchanged?

Dr. SHANON. We received from the Russians about a year ago a group of scientists to discuss vaccines and we in turn sent them a group. Dr. Burney was involved in that.

Senator STENNIS. Would you gentlemen mind preparing us a little synopsis of what has been done in particular response to Senator Pastore's question, and let us file it for the record. I know you could not do it offhand, but you could prepare that and send it in.

(The material referred to follows:)

ILLUSTRATIONS OF INTERNATIONAL INTERCHANGE IN MEDICAL RESEARCH

A. Exchange missions

Since 1956 there have been two Public Health Service official exchanges of health and medical scientists with the Soviet Union. In 1956 a five-man mission of United States microbiologists visited the leading virology laboratories in Moscow, Leningrad, and Southern Russia. Under the chairmanship of Dr. John R. Paul, professor of preventive medicine, Yale University Medical School, the mission included:

Richard E. Shope, M. D., Rockefeller Institute, New York.
Karl F. Meyer, director, Hooper Foundation, and professor of experimental pathology, University of California.

Colin M. MacLeod, M. R., C. M., professor of microbiology, New York University Medical School.
Michael B. Shimkin, M. D., National Cancer Institute.

In late 1957 there was an exchange mission of public health experts between the United States and the U. S. S. R. The United States mission, under the chairmanship of Dr. Thomas Parran, dean, Graduate School of Public Health, University of Pittsburgh and former Surgeon General of the Public Health Service, visited medical and health institutions in Leningrad and Moscow and in central Asia, as well as visiting farms, industries, and a variety of social and cultural institutions. In addition to Dr. Parran, the mission included Dr. Otis L. Anderson, Chief of the Bureau of State Services, Public Health Service; Dr. Malcolm H. Merrill, director of public health, State of California; H. van Zile Hyde, M. D., Chief, Division of International Health, Public Health Service; and Dr. Leonid S. Snegireff, associate professor of public health practice, Harvard University.

Additionally, an exchange of women physicians has been arranged by the National Academy of Science with funds made available by the Rockefeller Foundation. The American group headed by Dr. Helen Taussig, of Johns Hopkins, and including the commissioner of health of New York City, leaves for Moscow next month. Altogether over 50 American physicians have visited Russia in the past 2 years, many as tourists. A group headed by Dr. Paul Dudley White included Dr. Howard Rusk, Dr. Herman Hilleboe, commissioner of health of New York State, and Dr. James Watt, Director of the National Heart Institute.

The reciprocal Russian teams have traveled widely throughout the United States—from coast to coast—visiting typical urban and rural health facilities as well as major research and teaching institutions. One group attended, during its visit, the annual meeting of the American Public Health Association.

An agreement between the United States and the U. S. S. R., which was signed on January 27, 1958, provides for a variety of scientific and cultural exchanges during 1958 and 1959, including eight exchange missions in health and medicine, and exchanges of lecturers, literature, and medical films. Although the agreement specifically mentions exchange missions in new antibiotics, microbiology, physiology, and pharmacology of the nervous system, radiobiology, biochemistry, metabolic diseases, endocrinology, community and industrial hygiene, there was also an expression by both sides that exchanges would not necessarily be confined to the fields enumerated. In announcing the agreement the Department of State pointed out that, for the most part, the United States exchange missions would be sponsored privately.

At the request of the Department of State, the Public Health Service has undertaken to find sponsors for the missions specifically mentioned and for others in which Soviet representatives expressed interest during conversations leading up to the agreement. Missions are in active process of formation in radiobiology, cancer, poliomyelitis, and biochemistry, and it is hoped that these exchanges may be accomplished during 1958.

B. Interchange of scientific personnel

At present four programs are operating at the following levels:

1. There are 81 foreign visiting scientists at NIH from 27 countries. Salaries of these visitors total about $650,000 a year. The work of these individuals is part of the normal operation of the Bethesda program. Many are in supervisory positions of a semipermanent nature.

2. Foreign guest workers at NIH total 18 at the present time, representing 11 countries. There is no cost to NIH in salaries or stipends. Support is given for work which is usually collaborative in nature.

3. In fiscal year 1957, NIH supported 78 American research fellows studying in 11 foreign countries. The total expenditure was approximately $360,000. In 1958 about $400,000 will be awarded.

4. Extended fellowships: Postdoctoral research fellowships for citizens of other countries were reestablished on a limited and modified basis this fiscal year, 1958. The purpose is to foster better understanding and exchange of scientific information between scientists of the United States and other countries. A limited number of fellowships were made available to establish the program and try out a new selection technique. The fellows are nominated by medical research organizations in their own country with final selection by a committee of NIH scientists with a non-NIH committee chairman; $102,000 is available in

fiscal year 1958, which was contributed by the several Institutes from regular fellowship funds. Comparative transfer to DRG allotments is proposed for fiscal year 1959 for a program at the same level.

On April 25, 1958, postdoctoral medical and biological research fellowships to 13 European scientists were announced. The exchange of ideas and knowledge between these scientists and scientists in the United States should eventually lead to real health benefits for people of all nations. The European scientists will receive intensive research training at outstanding United States medical research centers of their own choosing.

Each of the scientists holds a doctorate degree or its equivalent in one of the medical or related sciences and has demonstrated outstanding research promise. All have a workable reading and speaking knowledge of the English language and have completed satisfactory arrangements with the laboratories in the United States at which they propose to train. The fellowships provide a basic stipend of $3,800 per year, a dependency allowance of $350 for the spouse and each dependent child, and limited travel funds.

C. International scientific assemblies

At the present time, through National Institutes of Health appropriations, support is provided for international scientific assemblies in two basic ways.

First, on the basis of applications made to the Institutes by the sponsoring group, reviewed by Advisory Councils for their relative contribution to a given scientific field, grants are awarded by the Surgeon General to defray a portion of the cost of organizing and carrying out the broad intent of specific international scientific assemblies. Such grant funds have in the past been used to provide travel funds for scientists invited to participate in the meeting, and to cover program planning, administrative costs, or publication of proceedings. In fiscal year 1957, fifteen international meetings were partially supported in the amount of $110,000. In fiscal year 1958, it is estimated that perhaps 25 such meetings will be partially supported in the amount of $150,000. Typical of the professional groups receiving support are the International Union Against Cancer, the International Congress of Cardiology, the World Congress of Gastroenterology, and the International Congress on Nutrition.

Second, National Institutes of Health appropriations have been used to provide indirect support of international assemblies through the grantee's use of a portion of his research grant funds to pay for travel to such meetings. This is done at times by provision for such travel in the grant application. More often, in the course of grant-supported research, the grantee is specially invited to present a paper on his work at an international meeting.

With the recommendation of an Advisory Council and approval by the Surgeon General, research grant funds may be used for this purpose. It is estimated that in fiscal year 1958, perhaps as many as 150 grantees have attended international scientific meetings under these circumstances, supported in part by funds totaling approximately $100,000.

In addition, during the first half of fiscal year 1958 there were 80 NIH scientists who attended 51 international meetings at an estimated cost of $32,000 derived from intramural budgeted funds. Funds available during the entire fiscal year for this purpose total $50,000.

D. International research activities

International research, for this purpose, is defined as research that is done outside of the United States and its Territories. Excluded under this definition is the substantial volume of research conducted in this country which obviously has international significance insofar as it is productive and its results are widely disseminated throughout the world.

There are two major ways in which NIH programs have provided support for research that is conducted in other countries. The first of these is through research grant support.

A limited number of grants are made to foreign nationals. It is evident that research grant funds are intended primarily for support of research by United States scientists and carried out within the United States. On the other hand, it is equally evident that three are circumstances under which it is to the best interests of the American people as well as of science for these funds to be used in support of non-United States studies. By statute, the fundamental scientific and program recommendations on which projects shall be supported rest with the advisory councils. These advisers, supported by the advice of study sections and working with Public Health Service staff, have evolved in practice a

set of general criteria against which research grant applications submitted by foreign nationals are measured. Suitability of such a grant is inquired into in terms of the uniqueness of the research opportunity, the special qualifications of the investigator, the characteristics of his research environment, the merit of the project application, and the total need for the data to which the project is directed.

Grant applications from non-United States scientists are screened carefully by PHS advisory groups from their points of view. Under these circumstances, only a small percentage of the appropriated research grants funds are awarded to scientists in other countries. It has become increasingly clear that positive good would accrue from the further exploitation of this type of opportunity to acquire new knowledge.

In addition to the support of research by grants, the Public Health Service also conducts as part of its own direct activities certain laboratory and field studies which are carried out in other countries. These are treated as direct extensions of its own laboratory and clinical studies in this country.

The establishment of such field laboratories and studies takes place only after careful assessment, among other things, of the potential values of the studies, the degree to which they relate to continuing research interests in the Bethesda and other laboratories, and the international scientific and governmental relationships involved. In the past, these direct offshore research operations have included, for example, the field study of filariasis in Tahiti, the study of the control and treatment of onchocerciasis in Guatemala, the demonstration in Egypt of the use of chemicals to control snail populations that are host to the organism of schistosomiasis, and research on the several tropical diseases that are endemic in Liberia.

In such studies, and particularly when they involve the construction or modification of laboratories, the opportunities and obligations for collaboration with other Government research programs are many.

Included in the direct support of research, too, is the extensive international exchange of infectious organisms, biologics, and chemicals between scientists at NIH and scientists in academic, Government, and industrial laboratories all over the world. The Division of Biologics Standards, for example, supplies reference standards and reference sera and vaccines to foreign governments on request. Steroid chemicals, analgesic drugs, analogs of vitamin B_{12}, and other chemicals are exchanged and a substantial number of chemicals in the cancer chemotherapy program are received for screening in animals and for clinical trial in man.

In 1957, NIH appropriations supported 58 research project grants in the total amount of $814,600. In 1958, this has increased to 74 projects at a total cost of $1,143,500.

The characteristics of these grants to non-United States scientists can be seen from these typical current projects:

$19,880 to Dr. A. Hurtade, University of San Marcus, Peru, for study of saline therapy in burns and shock—a form of therapy particularly important in Peru and other countries where plasma and other antishock agents are largely unavailable.

$15,676 to Dr. A. Laeassague of the Pasteur Institute, France, for research on the mechanism of carcinogenesis by conjugated molecules.

$115,000 to Dr. A. Haddow, Chester Beatty Research Institute, London, for research on cancer chemotherapy.

$12,000 to Dr. S. Sugiuri, Yamanashi Medical Research Institute, Kofu City, Japan, for studies on Schistosoma japonicum.

In current direct research operations outside of the United States, there is a new development in the establishment in Panama of a field station to further research in disease of importance in the tropical Americas, such as the arthropod-borne viral infections and fungal diseases. This project was developed in collaboration with the Department of the Army and with the support of the Government of Panama.

E. Translation and distribution of Russian and other foreign-language literature in the medical and biological sciences

When the first of a recent series of American medical scientists' missions to Russia returned from that country 2 years ago, its observations confirmed the widely accepted impression that Soviet scientists in general are more abreast of American developments in the medical and biological sciences than is true in reverse.

Many diverse and often conflicting explanations are advanced for this seeming disparity. They need not be discussed here, since there is general agreement (*a*) that there is immediate need for better and faster communication of the scientific literature of all nations; (*b*) that language differences will continue to be one of the primary barriers to scientific communication in the foreseeable future; (*c*) that effective translation programs, with the product widely disseminated, can aid materially in the reduction of the international communication problem; and (*d*) that the Public Health Service bears a major portion of this country's responsibility to facilitate the translation and dissemination of scientific literature in medicine and biology for the benefit of American scientists and scientists everywhere.

It was to this end that Congress in 1957 directed the National Institutes of Health "to provide, through grant or contract, a Russian medical research translation service," and authorized $233,000 for the program during that year. It has continued at essentially the same level during fiscal year 1958.

The program was designed to meet certain of the more apparent needs of those engaged in a wide variety of biomedical sciences, both basic and clinical, through publication and distribution of selected Russian translated journals, abstracts, reviews, informational directories, compilations, and guides.

The program is now in its second year. The progress made is indicative of the nature of the current program. It includes:

Translation of 28 issues of 8 journals and their distribution to 300 medical libraries and 80 Government installations.

Translation, publication, and distribution by Excerpta Medica of 6 issues of Abstracts of Soviet Medicine, containing approximately 3,000 translated Russian abstracts. Thirty-five editors of American specialty journals are scanning these abstracts to select individual papers for republishing.

Grants for the preparation of review papers on Russian neurochemistry, cardiac physiology, and air-pollution research.

Near completion by the Academic Press of a Russian-English medical dictionary.

Translation of 5 Russian monographs for publication by the Pergamon Press.

Preparation and distribution of informational materials such as A Guide to Scientific Translation Services, Koenig's Medical Research in the Soviet Union, and A Directory of Soviet Research Institutes in Biology and Medicine.

Support, jointly with the National Science Foundation, of the national translations pool at the John Crerar Library, Chicago.

There is ample evidence that American scientists are just starting to become aware of the large volume of scientific literature available in Russian. Initial use of the translated abstracts and journals, supported by NIH funds, has created sharp scientific interest in Russian accomplishments in other fields.

Background Statement on the Russian Scientific Translation Program

Following testimony before the Senate Appropriations Committee concerning the promptness with which Russian medical scientists were provided with translations of American research papers, the committee authorized the National Institutes of Health to provide, through grant or contract, a Russian medical research translation service. (Senate Appropriations Committee report: Labor-Health, Education, Welfare Appropriations, 1957, p. 19.)

Technical and substantive features of this mission were discussed in the early summer of 1956, with representatives of the National Science Foundation and the Atomic Energy Commission (two agencies with existing Russian translation programs), with a number of scientists especially knowledgeable in this area, and with appropriate officials within the Public Health Service and the Department.

A draft program, dated July 3, 1956, was widely circulated. With some amendments based on both scientific and technical comment received, this draft program was approved, and the remaining months of 1956 were spent in putting the program into operation. Production did not fairly start until the beginning of 1957. This report is therefore a review of accomplishments from January through December 1957.

Scope of the program

The medical sciences form a complex composed of many specialized groups; the channels and techniques for communicating information are varied. The NIH translation program, to accommodate these complexities, is broad in two dimensions:

1. It attempts to meet the needs of those engaged in a wide variety of biomedical research, both basic and clinical.

2. It uses a number of techniques—translated journals, translated abstracts, reviews, directories, bibliographies, and guides—to reach the scientific community.

In two areas—basic biological sciences and radiobiology—the NIH program overlaps the interests of the National Science Foundation and the Atomic Energy Commission, respectively. Cooperation of the program officers has insured close coordination among the Federal translating programs, and there have been no examples of conflict or duplication.

The NIH program consists of a number of projects, which for convenience may be grouped in the following categories: I, Republication projects; II. Evaluation projects; and III. Support of scientific translating.

I. REPUBLICATION PROJECTS

The general purpose underlying the republication of scientific papers translated from their originals is to make more readily available the results of Russian experimental work. In the technologies, these results may have immediate application and may represent dollar savings. In the basic biomedical sciences—with which much of the NIH program is concerned—the results require objective analysis and republication in American laboratories for their acceptance.

Apart from the primary judgments selecting those journals and books which promised to be fruitful sources of ideas and data, the NIH program has left judgments on the validity of Russian contributions to the scientific community. The program has concentrated on giving the community enough information to make these judgments.

To insure a prompt and wide dissemination of information to American medical research scientists, the program procured from the Medical Library Association a list of 300 scientific libraries of tax-supported or nonprofit institutions. These addresses were supplemented by some 80 research installations of the Army, Navy, Air Force, and Veterans' Administration. All publications sponsored or issued by the program are distributed directly to these libraries, where they are made available to research scientists.

There were essentially two aspects of the availability problem to provide capsule reporting for the totality of medical investigations in the U. S. S. R., and to cover certain areas of concentrated interest intensively. Abstracts of Soviet Medicine provide the comprehensive coverage; the translated journals and monographs cover the intensive aspects.

Abstracts of Soviet Medicine.—Excerpta Medica Foundation of New York and Amsterdam, a leading international publisher of medical abstracts, applied for a $40,000 grant to the National Advisory Cancer Council to enable it to translate (as originally planned) sections of the Russian medical abstract journal Sovetskoe Meditsinskoe Referativnoe Obozrenie. Subsequently, the Academy of Medical Sciences, U. S. S. R., revised its publication plans, and the grant terms were altered to provide a 2-section Abstracts of Soviet Medicine—section 1 devoted to the basic, and section 2 to the clinical sciences, both sections to be published quarterly. The 4,000 abstracts to be published are assembled half from the contributions of the 30 advisory editors whom the Academy of Medical Sciences had appointed to the editorial boards of Excerpta Medica, and half to be translated from the new Meditsinskiy Referativny Zhurnal (Medical Abstract Journal) which began publication January 1, 1957.

Five of the eight projected issues of Abstracts of Soviet Medicine have been published and distributed to 300 American medical and scientific libraries and 80 Government installations.

Translated journals.—Coverage in depth by the cover-to-cover translation of journals was indicated where (*a*) evidence points to a concentration of Russian papers of potential stimulus to American research and (*b*) where the field is under active development in this country. The journals selected for cover-to-cover translation were chosen on the recommendation of scientific groups, and answer these specifications. In general, they are basic science journals, as opposed to those representing clinical specialties.

Two of these, Biochemistry and the Bulletin of Experimental Biology and Medicine, were already in publication by Consultants Bureau, New York. In purchasing 400 subscriptions for its distribution list, NIH secured agreement from the publisher to reduce the sales price from $95 to $20, thereby making them more generally available, and enabling the publisher to build a distribution list against the day when Government support would be withdrawn.

Contracts for the translation and publication of six more—Biophysics; Journal of Microbiology, Epidemiology, and Immunobiology; Problems of Hematology and Blood Transfusion; Problems of Oncology; Problems of Virology; Sechenov Physiological Journal of the U. S. S. R.—were awarded after competitive bidding to the newly formed Pergamon Institute of New York and London. As in the case of the Consultants Bureau journals, these are available for subscription at reduced prices. Specifications for these journals include letterpress, and reproduction of photographic illustrations from originals.

Since the Russians are publishing approximately 20 percent more pages in these journals, and since production costs are rising, contracts for a second year are expected to show higher costs.

Of 80 principal Russian medical journals, the NIH program supports the translation of 8, or 10 percent. The remaining 90 percent consist for the most part of specialized clinical aspects, or journals of medical and public-health practice. Papers of basic research interest are less frequent. To cover such journals, provision for the translation and republication of individual papers selected on the basis of significance to specialized fields has been made with the cooperation of the editors of 35 American journals.

By arrangement with Excerpta Medica, the participating editors receive advance proofs of Abstracts of Soviet Medicine. Three of the editors are reprinting these abstracts; others have taken advantage of the NIH offer to translate in full papers selected from the abstracts as having significance for their specialty fields. Identification of outstanding contributions and their republication through journals which reach special-interest professional audiences becomes a shared responsibility.

Monographs.—Under a grant made by the National Advisory Health Council, the Pergamon Institute is currently engaged in translating five titles selected on recommendations from an Ad Hoc Advisory Committee which met on May 31, 1957. Other titles for translation are being considered.

II. EVALUATION PROJECTS

The attenuation of normal scientific communications during the war and postwar years left American scientific workers with only fragmentary knowledge concerning the status of large areas of science in the U. S. S. R. A wider knowledge of scientific activities and trends is essential for informed scientific judgment on the significance of the Russian contributions.

Simultaneously with making available the accomplishments to be judged, the NIH program has tried to give the scientist the background information needed to judge them. This consists of (*a*) information on the trends in specific research fields and (*b*) information on the backgrounds of Russian research—its organization, characteristics, and personalities. The program attempted to accomplish these objectives by supporting the preparation of review papers and by preparing informational publications.

Review papers.—The research-grant mechanism was used to support the preparation of review papers covering segments of Russian scientific accomplishments. The appropriate National Advisory Councils received and approved applications for surveying Russian accomplishments in the following fields: Soviet Research in Neurochemistry; Arterial Hypertension and Coronary Artery Diseases; Air Contamination and Purification. Continuations for these grants have been approved. Applications for reviewing Russian literature in the fields of interoceptive conditioning, psychiatry, and dentistry have been received, and referred to appropriate study sections and research councils for screening.

Russian scientists review their own advances and publish periodic evaluations and consolidations. The program located some 80 review papers published in the Russian literature from 1955 to 1957, and is having these translated with a view to republication either in appropriate journals or in one or more collections.

The reports and evaluations made by scientific and professional visitors to the U. S. S. R. are also useful in giving the American scientist yardsticks with which to evaluate the status and trends of Russian research in their fields. The pro-

gram assembled these reports and published an annotated list under the title of Medical Research in the Soviet Union: Recent Reports From Western Sources. Over 500 copies of this list have been distributed.

Publications.—To enable American scientists to plan their itineraries or, failing direct visits, to correspond with Russian scientists, and to request publications and reprints, the program published a preliminary Directory of Medical and Biological Research Institutes of the U. S. S. R. The program distributed over 600 copies of this directory and prepared a revision, listing the subdivisions of the Institutes and providing the whole with a subject index and a name index.

To provide background information on the planning and conduct of medical research in the Soviet Union, the program has been editing for publication a study of the organization and functions of the Academy of Medical Sciences, U. S. S. R. Manuscript for this publication is in final stages of preparation for offset reproduction.

III. SUPPORT OF SCIENTIFIC TRANSLATING

The program had a concern with the utilization of existing translations and with the improvement of current translation. The objectives are to reduce the unintentional duplication of translations already made (thereby conserving manpower), and to provide technical assistance to translators with the aim of improving the quality of their work. In this area, there were four projects:

Support of a national translations pool.—NIH joined the National Science Foundation in granting support to the Translation Center maintained by the Special Libraries Association at the John Crerar Library, Chicago. This support enables the center to operate as a central depository for scientific and technical translations made by cooperating agencies, public and private, to list the translations so deposited in Translations Monthly, and to provide photoduplication service on request and at cost. The initial grant was continued for fiscal year 1958, and NIH is now in its second year of cooperative support with the NSF.

Guide to scientific translation services.—The program supported the publication of a Guide cooperatively prepared by the National Library of Medicine, the National Science Foundation, and NIH. This guide (PHS Publication 514) lists national sources and services.

Russian-English medical dictionary.—To fill an urgent need for a specialized dictionary covering the medical sciences, the program found a publisher and provided scientific editorial assistance for a 27,500 word Russian-English medical dictionary compiled by Stanley Jablonski of the indexing division, National Library of Medicine. Dr. Benjamin S. Levine has provided scientific editing under contract, and the Academic Press, New York, is publishing the dictionary.

Translation services.—As an indirect result of NIH support, both the Pergamon Institute and the Excerpta Medica Foundation have expanded their scientific translating services. The Pergamon Institute offers to translate at modest charges any paper in any field of Russian science, while Excerpta Medica offers to provide full translations for papers abstracted in Abstracts of Soviet Medicine.

Program coordination

The program has been carefully coordinated with other governmental and private agencies in the field. Informal discussions with program officers in the National Science Foundation, the Atomic Energy Commission, the Department of Commerce, the Department of Agriculture, the Department of Defense, and other interested agencies have been frequent. On a formal level, the program has been represented on the Subcommittee on Russian Science of the Interdepartmental Committee on Scientific Research and Development. Advice given by the program was instrumental in bringing about the publication, with support from 11 pharmaceutical firms, of the translated journal Pharmacology and Toxicology.

Herner-Meyer survey

The ultimate success of the effort to communicate information on Russian research in the medical-biological sciences can be judged only on the basis of the degree to which the information is absorbed or rejected by American researchers. This testing takes time, since it may involve the replication of Russian experimental work, the verification of data reported, and the evaluation of hypotheses, methodology, and conclusions. Value judgments are the responsibility of the

scientific community; the program's success should be judged on the basis of its ability to disseminate information.

To test the efficacy of the communication channels used, the program gave a contract to the Herner-Meyer Co. to investigate the methods used by American medical scientists in acquiring information about Russian work. Five hundred scientists were interviewed from January through March 1957, before the translated publications were distributed in any volume; and the resulting report, The Use of Soviet Medical Research Information by American Medical Scientists, was submitted to NIH on September 10, 1957. It was subsequently released at a Herner-Meyer press conference on October 29, 1957.

The report showed that American medical scientists have a general lack of acquaintance with the Russian literature, a concern with the literature by subject fields as opposed to special national origins, and a reliance on oral communication and abstract services for broad current information. The data submitted by Herner-Meyer provide a useful baseline from which to orient future program developments.

Plans for fiscal year 1958

The budgeted amount for fiscal year 1957 was $233,000, of which the program obligated $222,407.31. The budget for fiscal year 1958 is $209,000.

This latter amount reflects a judgment that the mechanisms established on NIH initiative were adequate to report the available Russian findings in biological and medical science, and that a period for scientific evaluation should precede further development.

One area not now covered by the scientific translation program is that of the behavioral sciences. The basic journal here is the Pavlov Journal of Higher Nervous Activity, and a number of requests have been received for its translation. The program plans to translate this, or a comparable mental health journal, in the near future.

The program will be producing a revised directory, a revised guide, a study of the Academy of Medical Sciences, and other low-cost informational materials during 1958. A modest number of monographs will be screened and submitted for translation.

TRANSLATION SERVICE

Dr. SHANNON. We would be delighted to do that. Two years ago, we started a translation service so that the scientific results that became available to our Russian colleagues would also be available to our own scientists.

Senator STENNIS. You could cover that in this statement I just asked for. I feel, without wanting to cut anyone off at all, or without wanting to rush you, I feel we should move along.

Dr. Heller, do you have something further you want to cover in your testimony?

Dr. HELLER. I believe not, unless you have some specific questions that you members would like to ask.

Senator STENNIS. Senator Pastore.

Senator PASTORE. I have no more questions.

Senator STENNIS. We certainly do thank you.

I am sure the chairman would want to thank you, also, and that if he hadn't been detained on some major matter he would have been back here. We thank you very much. Your testimony is always interesting and it seems to me that it always has an encouraging note to it.

Dr. HELLER. I appreciate the opportunity to have appeared before the committee.

Senator STENNIS. I look forward to you filing that statement in further answer to Senator Pastore's questions because I believe it is of a great implication medically and politically and internationally, also.

CANCER RESEARCH

Dr. HELLER. I have here a statement on some recent advances in cancer research which might be of interest to the committee.

Senator STENNIS. That statement may be made a part of the record.

(The statement referred to follows:)

RECENT ADVANCES IN CANCER RESEARCH, JANUARY–MARCH 1958

Items of interest on program developments and research studies conducted and supported by the National Cancer Institute

Methotrexate in the treatment of choriocarcinoma

Continuing good results in chemotherapy of a rare type of cancer, choriocarcinoma, are reported by a National Cancer Institute grantee at Roswell Park Memorial Institute.

Dr. James F. Holland has reported the apparent suppression of choriocarcinoma in a patient treated with methotrexate. This is believed to be the first case of its kind other than those reported by Dr. Min C. Li, Donald B. Spencer, Dr. Roy Hertz, and Dr. Herbert A. Lubs, of the NCI Endocrinology Branch.

A 33-year-old woman was treated according to the schedule prescribed by Dr. Li, who is now on the staff of the Memorial Center, New York City. The patient, who was first placed on drug therapy in the fall of 1956, responded almost immediately. The level of chorionic gonadotropin, a hormone produced by the uterine tumor, fell sharply to normal after the first course of methotrexate. Metastatic lesions in the lungs began a progressive decrease in size, as did the primary pelvic tumor. By February 1957, the patient was apparently completely free of any malignant growth.

At the time the report was written, the patient was in remarkably good health. Dr. Holland plans to administer methotrexate at 30- to 60-day intervals, depending on toxicity, to maintain suppression of the tumor if any remains. Toxic side reactions were severe at times in this patient but never life threatening, Dr. Holland reports.

New drug, azauridine, active against experimental mouse tumors

Promising results have been obtained in mice with a new drug, azauridine, reports a National Cancer Institute grantee at the Yale University School of Medicine.

Dr. Julian J. Jaffe and his colleagues selected the drug, AzUR, on the basis of theoretical considerations. It is related chemically to 6-azauracil, AzU, which was synthesized by these grantees in 1955 and was used with encouraging results for the treatment of cancer in human patients by NCI scientists.

Studies with these substances are based on the assumption that anticancer chemicals act by interfering with life processes (metabolism) of cancer cells. Accordingly, it appeared reasonable to assume that significant interference with the formation or utilization of one important cell component, uracil, could profoundly affect the reproduction of cells. This line of reasoning led to the synthesis and anticancer tests of AzU, an antagonist of uracil.

Later studies suggested that inhibition of cell reproduction in bacteria may require the formation of ribose-containing derivatives of AzU. Tests were then made of the urine of mice receiving AzU and the presence of material behaving like AzU-riboside (AzUR) was demonstrated. These findings suggested the use of AzUR as an anticancer drug.

In the present study, comparison was made of the activity of AzUR and AzU as inhibitors of the growth of three mouse tumors. Treatment was begun 24 hours after introduction of the cancer cells or tissue and was given either intraperitoneally at intervals of 8 hours or by way of the drinking water. Therapy was terminated after 6 or 7 days, after which the mice were sacrificed. The weights of tumors were then compared with those of the tumors of untreated control mice.

The results showed that AzUR is significantly more effective that AzU in inhibiting the growth of the mouse tumors, and when compared on a molecular basis (weight of substance per weight of one molecule of substance), the carcinostatic activity of the riboside is 10 to 20 times that of AzU.

The investigators reported: "Since the ability of individual animals to form active derivatives of AzU may be variable, and may be influenced by dietary

or many other factors, it would seem preferable now to give attention to the possible applications of AzUR as a carcinostatic agent, particularly in man."

Multicompound chemotherapy of animal cancers

Four agents used simultaneously cause marked regression of breast cancer of mice, whereas lesser combinations, regardless of dosage, produce only retardation or cessation of tumor growth. These findings were reported by Dr. Daniel M. Shapiro, a National Cancer Institute grantee at the College of Physicians and Surgeons, Columbia University.

The four compounds used in this study were nicotinamide, 8-azaguanine, deoxypyridoxine, and testosterone. When they were tried singly, or in any combination of three, the best result obtained was a stoppage of tumor growth. It took all four compounds used together to produce actual regression in the size of tumors.

In general, administration of the 4 compounds produced occasional deaths and a host weight loss of from 6 to 9 percent. When treatment was extended beyond 6 to 8 days in an attempt to produce complete regressions, serious host toxicity developed.

These findings support the principle of simultaneously attacking tumors by a variety of metabolic pathways as one means of improving the effectiveness of known anticancer agents. The author suggests that selectively increasing the number of agents simultaneously administered can progressively augment anticancer activity and possibly produce complete tumor eradication.

Derivative of methotrexate for treatment of advanced mouse leukemia

A drug that produces a marked increase in survival time of mice with advanced leukemia is reported by Dr. Abraham Goldin, of the Laboratory of Chemical Pharamacology.

Dr. Goldin and his associates have reported results obtained by treating mice with a compound related to methotrexate (amethopterin), which is widely used in the treatment of human leukemia.

The purified drug, 3′,5′-dichloroamethopterin, produced a 75-percent increase in survival time beyond that achieved with methotrexate, when tested against mouse leukemia according to an assay procedure developed in Dr. Goldin's laboratory. Using this procedure, these scientists had previously found methotrexate to be more effective than other antileukemic agents currently employed in increasing the survival time of mice with advanced leukemia.

The procedure involved the continued daily treatment of leukemic mice at a series of dosage levels of the drug. Treatment was begun when the local tumor at the site of leukemic inoculation was approximately 10 millimeters in diameter. At this time, the disease was systemic as well as local, and untreated animals died 2 to 3 days later.

The antileukemic effectiveness of a drug is dependent upon the specificity of its action as shown by an increase in survival time of the animal. If a dose possesses antileukemic specificity, survival time increases with increasing dosage until a level is reached at which toxicity of the drug for the host becomes dominant. Further increases in dosage result in decreasing survival time. The optimal dose of dichloramethopterin was approximately 50 times that of methotrexate and produced survival times beyond 50 days in a few mice.

Results of these experiments emphasize the need of such systematic studies of compounds closely related to drugs of known activity. Additional derivatives of methotrexate and related compounds are being studied by the comparative testing procedure developed in this laboratory.

Protection against toxicity of nitrogen mustard

A chemical, AET, protects mice against the toxic effects of nitrogen mustard, an anticancer drug used in the treatment of Hodgkin's disease, reports Dr. Margaret G. Kelly, General Medicine Branch.

Tumor-bearing mice pretreated with the chemical, aminoethylisothiuronium bromide hydrobromide (AET), were completely protected against a dose of nitrogen mustard that would ordinarily kill 50 percent of the animals. In no case was the anticancer effect of nitrogenmustard suppressed by AET.

The investigation stemmed from reports from the Oak Ridge National Laboratory of the Atomic Energy Commission that AET was effective in protecting mice and monkeys against the lethal effects of radiation. These observations suggested the possibility that AET might protect against the toxic effects of

alkylating agents, such as nitrogen mustard. This is a "radiomimetic" drug, producing in tissues effects similar to these produced by radiation.

The tests were made on mice that had a variety of transplanted tumors, including leukemia, lymphoma, sarcoma, and lympho-sarcoma. Injection of AET alone produced no demonstrable effect on any of the tumors, but pretreatment with AET permitted the use of higher doses of nitrogen mustard.

The mean survival time of mice bearing implants of leukemia (L1210) and sarcoma (reticulum-cell sarcome No. 6867) was always longer in animals pretreated with AET than in mice given high dose levels of nitrogen mustard only, and was increased 20 to 50 percent over that of untreated controls.

In mice bearing subcutaneous implants of either of these two tumors, nitrogen mustard delayed infiltration of the liver with tumor cells. This action of the drug was also not inhibited by pretreatment with AET.

Histopathologic studies on mice pretreated with AET indicated that it decreased but did not entirely prevent the toxic effects of nitrogen mustard in bone marrow and intestine of normal and tumor-bearing mice.

AET showed a weak protective effect against the toxicity of thio-TEPA, but none against other "radiomimetic" drugs, such as Myleran, colchicine, and trimethyl colchicinic acid.

Cancer Chemotherapy National Service Center contracts

To date, the Cancer Chemotherapy National Service Center has signed 66 contracts, totaling $8,634,290, for the production, screening, and clinical trial of potential anticancer agents. Another 22 contracts, valued at $1,704,871, are pending.

Of the 88 contracts active and pending, 19 are with pharmaceutical firms. The remaining 69 awards are with universities, hospitals, and other scientific research institutions.

About half of the contracts, 35 active and 10 pending, call for the routine screening of chemical compounds, antibiotic culture filtrates, and hormonal substances. Another 9 active and 6 pending contracts are for the synthesis of potential anticancer drugs. Nineteen contracts, all active, are for clinical studies in cancer chemotherapy, including statistical evaluation. The remaining awards are for hormone assays and pharmacologic studies.

Cytology detects genitourinary cancer

Examination of urinary sediments yields correct diagnosis (positive or negative) in 60 percent of genitourinary cancer cases, reports an NCI grantee at the New York Hospital, Cornell Medical Center.

Summarizing the results of a study of 2,829 cases examined during the years 1945 to 1954, Dr. N. Chandler Foot has reported that this finding lends support to the theory that cytology can be useful in the early diagnosis of concer of the genitourinary system.

All the cases reported in this study were being treated for ailments of the genitourinary system at several New York City hospitals. On the basis of final, clinical diagnosis, these patients were grouped into three categories according to the location of their disorder: (1) bladder, ureters, and renal pelves; (2) kidney; and (3) prostate.

Cytologic study of the urine produced the most accurate results among the patients in category 1. A relatively low degree of accuracy of the cytologic test among patients in group 2 was explained by the fact that kidney tumors do not shed cells directly into urinary passages until late in the course of the disease. A similarly low degree of accuracy among patients in category 3 suggested that urine is probably not the best sample for cytologic examination and that more satisfactory results might be obtained through the use of prostatic fluid.

In vivo behavior of 2 cell lines grown from 1 mouse cell

The fate of two lines of cancer-producing cells injected into experimental animals is governed by a difference in the initial growth rate of the cells in the host, reports a Laboratory of Biology scientist.

Dr. Katherine K. Sanford and her colleagues have studied the ability of two separate cell lines, grown in tissue culture from a single mouse cell, to grow as cancers on injection into mice of the original strain. The single cell originated from a culture of normal mouse tissue.

Earlier studies showed that the two cell lines differ markedly in cancer-producing ability. One line almost always gives rise to tumors when injected into mice, while the other line rarely produces tumors.

In the present study, both cell lines induced immunity in mice, but cells of the high tumor-producing line differed from those of the low line in quickly infiltrating surrounding tissue, causing enlargement and convolution of nearby blood vessels, and growing more rapidly during the first few days after implantation. During this period, there was no evidence that immunity had developed in the host mice.

These observations led the scientists to conclude that cells of the high line differ from those of the low by producing a tumor before immunity develops in the host. It is well known that an established tumor can continue to grow after immunity develops.

Although cells of the two lines grew at different rates in mice, the rate of growth of both cell lines was about the same in the test tube. Hence, the difference in tumor-producing ability between the two lines may be due to a difference in their response to some growth-controlling factor in the host mouse.

Chemical technique for measuring radiation

The amount of radiation delivered to internal body structures may be determined by measuring changes in the acidity of a gel containing chloral hydrate, reports Dr. Howard L. Andrews, Radiation Branch.

Development of a chemical technique for depth-dose measurements was undertaken in an effort to improve techniques of administering radiation.

This method is based on the fact that X-rays produce hydrochloric acid from a water solution of chloral hydrate. In the technique described, chloral hydrate is added to a hot agar gel. As it cools, the gel can be molded to any desired configuration and thus be made to represent the internal structures in which the radiation dose is to be measured.

The amount of hydrochloric acid produced in the gel dosimeter can be measured by spectrophotometry or by electrical conductivity. The addition of an indicator dye permits visualization of the color change resulting from changes in acidity of the gel.

Origin of lymphomas in mice receiving radiation and bone marrow

Bone marrow injected into mice to protect them from lethal doses of radiation survives for many months and sometimes develops into cancer, report Miss Delta E. Uphoff and Dr. Lloyd W. Law, Laboratory of Biology.

The study was an outgrowth of observations reported several years ago by National Cancer Institute investigators, who found that mice exposed to lethal doses of total-body radiation (about 900 roentgens) recovered from the effects of acute radiation injury when given an intravenous injection of bone marrow.

Later studies showed that if the irradiated mice receive isologous bone marrow (marrow from the same strain of mice), they survive 1 to 2 years, a somewhat shorter than normal lifespan. If homologous marrow (marrow from a different strain) is given, mice survive the stage of acute radiation damage, but many die in 21 to 90 days.

In the present study, the investigators observed that mice surviving more than 90 days after receiving radiation and homologous bone marrow may develop tumors. They undertook to find out whether the tumors of the bloodforming organs (malignant lymphomas) originated from the cells of the host animal or the bone marrow injection.

Many of the mice receiving homologous marrow showed a variety of reactions, such as loss of weight, diarrhea, and occasionally dermatitis. Of the mice showing a severe reaction, only a small number survived 90 days; of those showing mild or no reaction, all survived over 90 days.

Many of the malignant lymphomas that developed in the surviving mice were tested by transplantation of bits of tumor into animals of host or donor strain. This test was based on the same principle as that used in skin grafting; a "take" occurs when an individual receives a graft of his own skin or that of an identical twin, but not when he receives a graft from another individual. In the transplantation of tumors, those that grew progressively and killed the animal were considered to be of the same strain as the animal.

It was found that most of the tumors were of donor origin and only a few were of host origin.

The results show that the homologous bone marrow cells did not die, but survived in the irradiated host for as long as 18 months, and some developed into malignant tumors.

Intermittent radiation exposure of mice

Injured mechanisms for production of antibodies and leucocytes (white blood cells) apparently fail to recover during the interval between successive exposures of mice to radiation.

In a study reported by Dr. Falconer Smith and his colleagues of the Radiation Branch, groups of mice were exposed to a radium source providing 2.2 roentgens or 8.8 roentgens of gamma rays per 8-hour day for 51 days, or a total of 112 roentgens or 49 roentgens, respectively. Leucocyte counts were made on the second day after completion of radiation exposure.

Immunization by a single intravenous injection of a suspension of sheep erythrocytes was done 3 days after completion of exposure, and the mice were sacrificed 5 days later, or on the 8th day, for antibody determinations in the serum.

Both antibody production and leucocyte counts were lower in irradiated mice than in controls. The values were lower for the mice receiving 49 roentgens than those receiving 112 roentgens.

Thus, recovery of the specific immune mechanism studied in the mice did not take place during the 16-hour interval which elapsed between successive exposures to as little as 2.2 roentgens per 8-hour day.

In a subsequent experiment, the scientists wished to determine whether exposure of the mice to an accumulated total of 449 roentgens would have an additive effect, if followed by an acute exposure to X-rays. Four days after exposure to 449 roentgens in the radium field, mice were exposed to 150, 250, or 350 roentgens of X-rays.

The results showed that the "chronic" exposure to 449 roentgens did not significantly alter the response of the mice to a subsequent acute exposure to X-rays.

Reports in the scientific literature suggest that prolongation of survival time of irradiated mice and rats given intermittent doses of radiation is due to recovery processes that take place between doses. Results of this study showed two of these processes—the antibody producing capacity and leucocytes counts—apparently did not occur under the conditions of the experiments.

Protective effect of L-arginine

The amino acid, L-arginine, can be used to lower dangerously high levels of blood ammonia in certain circumstances in patients suffering from various diseases including cancer, reports Dr. John L. Fahey, General Medicine Branch.

Dr. Fahey's work is an extension of earlier studies by Dr. Jesse P. Greenstein, Chief, Laboratory of Biochemistry, who reported about 2 years ago that L-arginine reduces high ammonia concentrations in experimental animals. Administration of L-arginine speeds the Krebs-Henseleit cycle by which the liver converts ammonia to urea, Dr. Greenstein reported.

In a series of clinical trials, which followed extensive studies in experimental animals, Dr. Fahey found that intravenously administered diets of amino acids lacking L-arginine induced high ammonia concentrations and toxicity. Such toxicity could lead to shock, coma, and possibly death if untreated.

High ammonia levels were prevented or sharply reduced when L-arginine was administered, either separately or in combination with other amino acids. When glycine, another amino acid, was used to raise blood ammonia levels, L-arginine was equally effective in returning these elevated levels to normal.

Dr. Fahey observed that the amount of L-arginine needed to modify significantly the blood ammonia change resulting from amino acid administration varied with the amount, rate of administration, and ammonia-producing potential of the amino acid(s) used, and with the nutritional state of the patient. In Dr. Fahey's studies, some degree of fasting was required to produce a blood ammonia rise following administration of amino acids.

Dr. Fahey believes that L-arginine plays an important metabolic role when large amounts of amino acids are administered to man, and that this activity is consistent with the operation of the Krebs-Henseleit cycle.

Blood serum vitamin B–12 concentrations in cancer patients

In a survey of a large group of patients with malignant diseases, serum vitamin B–12 concentrations have been found to be much higher in patients with one type of leukemia than in those with other forms of cancer or in well persons.

Dr. I. Bernard Weinstein and Dr. Donald M. Watkin, General Medicine Branch, have reported that this result was obtained when the amount of vitamin B–12 was measured in the blood serum of 205 persons, 174 of whom had malignant diseases. In 11 out of 12 patients with chronic myelocytic leukemia, B–12 concentrations were markedly elevated, ranging from 2 to 40 times higher than normal.

In two patients with this disease, vitamin B–12 concentrations were measured periodically during the course of therapy. A clinical remission in one patient resulted in a reduction in B–12 concentration to the normal range.

Patients with some other types of cancer also showed elevated B–12 concentrations, but in no case were they so consistently high as in patients with chronic myelocytic leukemia. Elevated B–12 concentrations in patients with other forms of cancer usually occurred when the disease had metastasized (spread) to the liver.

The reason for the high B–12 concentrations observed in these leukemia patients is not clearly understood.

Role of serum in resistance to infection

An unidentified factor in human serum nullifies the characteristic effects of endotoxic polysaccharides (bacterial poisons), when serum and polysaccharides are incubated together in the test tube. This factor may be important in resistance to cancer.

Dr. Maurice Landy, laboratory of chemical pharmacology, and his colleagues have reported that this factor is not properdin (a substance in blood serum important to resistance to infection), since serum completely lacking in properdin is equally effective in inactivating endotoxic polysaccharides.

Further study showed that the factor is susceptible to heat; heated serum did not counteract the effects of endotoxic polysaccharides.

The significance of this study to cancer research lies in the fact that endotoxins produce the characteristic host reactions of certain infections and may also affect the host by increasing resistance to infection. These endotoxins, which are complex carbohydrates, also have the capacity to damage some cancer cells. Extensive research is being conducted to find out how the host attempts to counteract the effect of endotoxic polysaccharides, because the results of this research may help to explain the mechanism of resistance to infection, and possibly may be involved in resistance to cancer.

Water-soluble synthetic diets for rats

Studies with rats have shown the nutritional role of several components in synthetic diets, report Dr. Jesse P. Greenstein and his colleagues of the Laboratory of Biochemistry.

Some of the findings reported are as follows:

(1) Rats were fed chemically defined diets containing roughly 20 percent amino acids as the sole source of nitrogen. They bred, lactated, and reared young. Three successive generations were reared on the optimal diet.

(2) The ratio of nitrogen retained to the average daily weight gain was constant for animals on three diets which differed in amino acid composition, even though each diet produced different rates of growth.

(3) No amino acid studied was "nonessential" for maximal growth.

(4) Growth responses were similar when the diet contained sucrose, glucose, fructose, or invert sugar. Increasing quantities of D-glucosamine in the diet were associated with a progressively decreased dietary intake by the animal.

(5) The amino acids L- and D-arginine both appeared to render the diet nutritionally more adequate.

With regard to human use, the water-soluble diets are found to be edible and should prove of value in the care of patients with alimentary problems. They are particularly significant in that they open possibilities for a completely synthetic diet to be administered parenterally to patients who cannot eat. In their present form, the diets offer many possible advantages by virtue of their small bulk, such as economy of storage for civilian defense, arctic habitation, and space travel. Animals on the diets pass very small amounts of excreta, indicating a further advantage for human use under special conditions.

Cancer cells in operative wound washings

Correlation between the presence of malignant cells in surgical wound washings and local recurrence of cancer is confirmed, reports Dr. Robert R. Smith, Surgery Branch.

A review of the data obtained in the latest study failed to reveal a statistically significant correlation between wound washings and such factors as type of surgery performed, patient weight loss, size of primary tumor, lymph node metastases, or degree of histological differentiation of the cancer. However, the study showed a positive correlation between the finding of cancer cells in wound washings and blood vessel invasion, and between wound washings and ulceration of the primary tumor.

This report is the most recent of a series on this subject by scientists of the Surgery Branch.

Cancer incidence in Denmark and United States

Lung cancer, the leading cause of cancer death among men in this country, occurs at a slightly higher rate among men in Copenhagen than among those in metropolitan areas of the United States. Breast cancer, the leading cause of cancer deaths among American women, occurs at a lower rate among Danish women than among American white women.

These findings were reported in a recent publication by Danish scientists, Drs. Johannes Clemmesen and Arne Nielsen, of the Finsen Institute and Radium Hospital, Copenhagen, Denmark. Working under a grant from the National Cancer Institute, these investigators studied cancer incidence in Denmark and adjusted the data to the United States population of 1950, permitting a direct comparison between the incidence of cancer in Denmark and the United States.

Epidemiologic studies are designed to show the extent of disease in the population and to indicate possible relations between specific disease conditions and certain environmental and other factors, such as age, sex, occupation, living habits, etc. In studies of the epidemiology of cancer, it is often useful to compare incidence data obtained in two or more countries.

Analysis of the data comparing cancer incidence in Copenhagen with cancer incidence in 10 metropolitan areas of the United States as reported by Dr. Harold Dorn (NIH) and Sidney Cutler (NCI) in 1955, showed in part:

(1) Rates for cancer of the buccal cavity and pharnyx are lower for men and women of all races in Copenhagen than in the United States.

(2) White men and women in the United States show a lower incidence of gastric cancer than the Copenhagen population, while for nonwhites it is approximately equal. Women of all races in both countries show lower gastric cancer rates than man.

(3) Copenhagen men show a slightly higher lung cancer incidence than do men in United States metropolitan areas. For women, the difference is negligible.

(4) Breast cancer occurs among Danish women at about the same rate as it does among nonwhite women in the United States—that is, lower than the rate for United States white women.

(5) In both the United States and Copenhagen, nonwhite women appear to show a higher incidence of uterine cancer than do white women, although the relatively high proportion of unspecified cases reported in the United States makes analysis difficult.

(6) Prostatic cancer is diagnosed more frequently in the United States than in Copenhagen.

The total incidence rate for all malignancies reported in Denmark was highest in Copenhagen and lowest in rural areas.

Characteristics of mouse tumor agent propagated in tissue culture

The cancer-producing agent they discovered 2 years ago has biological and physical properties of viruses, two National Institutes of Health scientists report. The agent produces multiple tumors in mice and hamsters.

Dr. Sarah E. Stewart, Laboratory of Biology, National Cancer Institute, and Dr. Bernice E. Eddy, Division of Biologics Standards, have reported their latest findings in a collaborative study of a mouse tumor agent whose potency is increased in tissue culture.

One of the characteristics that the agent has in common with viruses is that it will grow in tissue culture and can be transferred in series from one tissue culture to another without loss of potency. In the present studies, the agent produced tumors in hamsters and mice after being passed through tissue culture many times. The tumor-producing activity of the agent was increased by alternate passage through tissue culture and mice or hamsters.

The agent has other virus characteristics. It is destroyed by heat but not by storage at freezing temperatures. The size of the agent is in the virus range,

as indicated by the pore size of the filter through which it passes. The agent is not destroyed by antibiotics, which kill bacteria but not viruses. The agent produces neutralizing antibodies in rabbits.

The tumor-inducing ability of the agent was accelerated when the animals were inoculated with a concentrate of the tissue culture fluid or with the active principle partially purified by chemical procedures. These results indicate that the tumor-inducing agent was concentrated by these methods and that its activity is related to the size of the dose.

This collaborative study originated in observations by Dr. Stewart that injection of new-born mice with cell-free mouse leukemia extracts produced an unusual type of tumor of the parotid (salivary) gland that rarely occurs spontaneously in mice. Injection of new-born mice with cell-free extracts prepared from the parotid gland tumors did not produce tumors.

But when cell suspensions of parotid gland tumor tissue were maintained in tissue culture and the cell-free supernatant fluids were injected into new-born mice, the mice developed tumors. All mice that developed such tumors had primary parotid gland tumors; and some also developed tumors of the thymus, adrenal glands, and mammary glands.

Similar results were obtained when an extract from a spontaneous mouse leukemia was used.

Mental Health Activities

STATEMENT OF DR. ROBERT H. FELIX, DIRECTOR, NATIONAL INSTITUTE OF MENTAL HEALTH; ACCOMPANIED BY DR. JAMES A. SHANNON, DIRECTOR, NATIONAL INSTITUTES OF HEALTH; DR. LEROY E. BURNEY, SURGEON GENERAL; ROY L. HARLOW, CHIEF FINANCE OFFICER; AND JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

Mental Health Activities

[Mental health activities:] For expenses necessary for carrying out the provisions of sections 301, 302, 303, [304,] 311, 312, and 314 (c) of the Act with respect to mental diseases, [$39,217,000] *$37,697,000.*

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate	$39,217,000	$37,697,000	$40,397,000
Deductions:			
Comparative transfer to "General research and services, National Institutes of Health, Public Health Service"	−801,000	0	0
Unobligated balance, estimated savings	−40,000	0	0
Total obligations	38,376,000	37,697,000	40,397,000

Obligations by activities

Description	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Grants:						
(a) Research projects	--------	$12,402,000	--------	$11,902,000	--------	$12,882,000
(b) Research fellowships	--------	546,000	--------	546,000	--------	546,000
(c) Training	--------	13,300,000	--------	13,300,000	--------	14,600,000
(d) State control programs	--------	4,000,000	--------	4,000,000	--------	4,000,000
2. Direct operations:						
(a) Research	435	5,917,000	435	5,808,000	446	5,968,000
(b) Review and approval of grants	55	601,000	55	591,000	62	661,000
(c) Training activities	8	78,000	8	70,000	8	70,000
(d) Professional and technical assistance	129	1,273,000	129	1,221,000	133	1,411,000
(e) Administration	40	259,000	40	259,000	40	259,000
Total obligations	667	38,376,000	667	37,697,000	689	40,397,000

Obligations by objects

Object classification	1958 appropriation	1959 budget estimate	1959 House allowance
PUBLIC HEALTH SERVICE			
Total number of permanent positions	662	662	684
Full-time equivalent of all other positions	37	37	37
Average number of all employees	584	[1] 618	[1] 637
Number of employees at end of year	666	[1] 682	[1] 701
01 Personal services	$3,762,950	$4,025,850	$4,164,000
02 Travel	329,200	312,900	406,000
03 Transportation of things	26,800	22,400	23,000
04 Communication services	56,100	56,100	57,000
05 Rents and utility services	62,500	6,500	7,000
06 Printing and reproduction	37,600	36,600	37,000
07 Other contractual services	212,550	205,650	318,000
Reimbursement to management fund, National Institutes of Health, Public Health Service	2,678,000	2,663,000	2,759,000
08 Supplies and materials	263,400	236,400	240,000
09 Equipment	442,000	205,900	215,000
10 Lands and structures	100,000	0	0
11 Grants, subsidies, and contributions	30,203,000	29,703,000	31,938,000
Contribution to retirement fund	165,500	185,800	195,000
13 Refunds, awards, indemnities	0	0	0
15 Taxes and assessments	17,400	17,900	19,000
Subtotal	38,357,000	37,678,000	40,378,000
Deduct quarters and subsistence charges	6,000	6,000	6,000
Total, Public Health Service	38,351,000	37,672,000	40,372,000
ALLOCATION TO OTHER AGENCIES			
Total number of permanent positions	5	5	5
Average number of all employees	5	5	5
Number of employees at end of year	5	5	5
01 Personal services	$18,800	$18,800	$18,800
07 Other contractual services	200	200	200
08 Supplies and materials	3,000	3,000	3,000
09 Equipment	2,000	2,000	2,000
11 Contribution to retirement fund	1,000	1,000	1,000
Total, other agencies	25,000	25,000	25,000
Total obligations	38,376,000	37,697,000	40,397,000

[1] Reduction in employment to absorb costs of scientist-engineer pay adjustment is not reflected in the 1959 President's budget, but is shown here since it is a mandatory item.

Summary of changes

	Positions	Amount
1958 actual appropriation	667	$39,217,000
Transfers: Comparative transfer to "General research and services, NIH"		−801,000
Adjusted 1958 appropriation	667	38,416,000
Deduct nonrecurring costs:		
Estimated savings		−40,000
Rental costs to be absorbed by GSA		−56,000
Temporary structure, greenhouse		−100,000
Research projects, Mental Health Study Act		−500,000
1959 base	667	37,720,000
1959 appropriation request	667	37,697,000
Net change requested	0	−23,000

	1959 budget estimate		1959 house allowance	
	Position	Amount	Position	Amount
Decreases:				
Reduction in new research projects to absorb indirect costs		$824,800		
Reduction in miscellaneous objects to absorb costs of annualization of retirement contributions		20,300		$20,300
Reduction in miscellaneous objects to absorb costs of annualization of 1958 program base positions		272,500		272,500
Reduction in employment to absorb costs of scientists and engineers pay adjustment		[1] 27,000		[1] 27,000
Net changes in reimbursement to National Institutes of Health management fund		15,000		
Subtotal decreases		1,159,600		319,800
Increases:				
For mandatory items:				
Retirement contributions: Annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)		4,600		4,600
Annualization costs for 1958 program base positions		279,100		279,100
Pay adjustment costs for scientists and engineers		[1] 27,000		[1] 27,000
Subtotal mandatory increases		310,700		310,700
For program items:				
Amount necessary to support full indirect costs		824,800		
Rental of station wagon for use of cooperative research project at St. Elizabeths Hospital		1,100		1,100
Research projects in alcoholism and schizophrenia				980,000
Training grants in alcoholism, schizophrenia, and other programs				1,300,000
Direct research in alcoholism and schizophrenia			11	130,000
Cost of increased review and approval services			7	49,000
Cost of increased technical assistance services in alcoholism			4	190,000
Net change in reimbursement to National Institutes of Health management fund				36,000
Subtotal program increases	0	825,900	22	2,686,100
Total change requested	0	−23,000	22	2,677,000

[1] Reduction in employment to absorb costs of scientist-engineer pay adjustment is not reflected in the 1959 President's budget, but is shown here since it is a mandatory item.

EFFECT OF HOUSE ACTION

Activity No. 1 (a)—Research projects

The House allowance provides an additional $980,000 to be applied to research in alcoholism ($300,000) and schizophrenia ($680,000). This is an increase of $480,000 over the 1958 level.

Activity No. 1 (c)—Training

The full amount requested of $13,300,000 was allowed. In addition, a training grant increase of $1,300,000 was allowed by the House over the amount requested. This increase will allow expansion of training grant programs in alcoholism ($125,000) and in schizophrenia ($475,000). It will also provide for expansion in psychiatric training for general practitioners, training in basic biological

sciences, and in basic psychologic and sociologic sciences ($700,000). This is an increase of $1,300,000 over the 1958 level for training programs.

Activity No. 2 (a)—Research

The full amount requested of $5,808,000 and 435 positions was allowed. In addition, the House allowance will finance an increase of $160,000 and 11 positions over the $5,808,000 and 435 positions requested, of which $55,000 and 4 positions will be applied to research in alcoholism, and $105,000 and 7 positions for schizophrenia research. This is an increase of $51,000 over the 1958 level.

Activity No. 2 (b)—Review and approval of grants

The House allowance will permit an increase of $70,000 and 7 positions over the $591,000 and 55 positions requested to provide services to the increased grants program. This is an increase of $60,000 over the 1958 level.

Activity No. 2 (d)—Professional and technical assistance

Of the increase allowed by the House, $190,000 and 4 positions over the $1,221,000 and 129 positions requested will be applied to alcoholism within this activity. This is an increase of $138,000 over the 1958 level.

Allocations of grant-in-aid funds for mental health

State or Territory	1957 allocations	1958 allocations	Estimated 1959 allocations
Alabama	$80,300	$81,200	$79,700
Arizona	25,000	25,000	25,000
Arkansas	50,300	48,800	46,600
California	267,500	274,100	278,900
Colorado	33,900	35,000	35,800
Connecticut	45,900	44,500	44,100
Delaware	25,000	25,000	25,000
District of Columbia	25,000	25,000	25,000
Florida	77,800	85,400	90,700
Georgia	91,700	90,900	90,600
Idaho	25,000	25,000	25,000
Illinois	197,400	193,000	193,900
Indiana	94,800	94,700	95,700
Iowa	61,700	60,100	61,800
Kansas	46,600	46,500	46,600
Kentucky	76,500	74,700	73,800
Louisiana	72,300	72,600	72,600
Maine	25,000	25,000	25,000
Maryland	57,500	59,300	60,000
Massachusetts	108,600	101,000	100,300
Michigan	153,400	156 500	159,900
Minnesota	72,700	72,000	72,700
Mississippi	62,500	60,500	60,900
Missouri	93,100	93,200	91,600
Montana	25,000	25,000	25,000
Nebraska	31,600	31,600	32,100
Nevada	25,000	25,000	25 000
New Hampshire	25,000	25,000	25,000
New Jersey	113,600	110,200	112,600
New Mexico	25,000	25,000	25,000
New York	339,700	331,900	319,700
North Carolina	109,100	110,500	110,200
North Dakota	25,000	25,000	25,000
Ohio	191,300	190,400	189,500
Oklahoma	53,000	52,000	51,900
Oregon	36,800	37,000	37,600
Pennsylvania	245,300	234,700	232,700
Rhode Island	25,000	25,000	25,000
South Carolina	60,400	60,500	60,200
South Dakota	25,000	25,000	25,000
Tennessee	86,800	86,300	84,400
Texas	199,100	201,600	202,800
Utah	25,000	25,000	25,000
Vermont	25,000	25,000	25,000
Virginia	85,300	83,700	85,400
Washington	55,700	56,200	56,500
West Virginia	49,900	48,200	47,200
Wisconsin	82,300	81,700	82,800
Wyoming	25,000	25,000	25,000
Alaska	25,000	25,000	25,000
Hawaii	25,000	25,000	25,000
Puerto Rico	65,600	64,500	63,200
Virgin Islands	25,000	25,000	25,000
Guam	0	25,000	25,000
Total	4,000,000	4,000,000	4,000,000

PREPARED STATEMENT

Senator STENNIS. Dr. Felix, we are very glad to have you here with us. I see you do have a prepared statement which I am sure is very good indeed. Do you want to place that in the record and then speak to the higher points, just as Dr. Heller did?

Dr. FELIX. Yes, sir.

Senator STENNIS. I believe you would be more effective, frankly, than you would be by merely reading the statement.

Dr. FELIX. Mr. Chairman and members of the committee, as you have said, Mr. Chairman, I have a prepared statement which I will file for the record. There are also two or three other documents which I should like to file which give the background material on certain elements of the program.

Senator STENNIS. You make such insertions in the record as you wish.

Dr. FELIX. Thank you, sir.

Then I have submitted to the committee, as they requested last year, a review of our training program. I should like, if the chairman and committee would permit, to submit the forecast and summary of this together with the letter of transmittal for the record. The whole report is quite long.

Senator STENNIS. The report will go in, plus the letter of transmittal and other papers. All will go into the record at this point.

(The material referred to follows:)

STATEMENT BY DIRECTOR, NATIONAL INSTITUTE OF MENTAL HEALTH

Mr. Chairman and members of the committee, for "Mental health activities in 1959," the budget proposed is $37,697,000.

Much progress was made during the past year in the Institute's continuing research, training, and community services programs. In addition, advances in such special areas as psychopharmacology, mental retardation, drug addiction, alcoholism, and aging have brought new knowledge and improved methods of applying that knowledge through organized public mental health programs.

The Institute's training grants and research fellowships programs have added substantial numbers to the reservoir of trained professional personnel needed to do research and to provide the many needed mental health services. Grants are also supporting the long-term development of outstanding investigators and teachers who are devoting their careers to mental health.

In the field of research, the Institute has allocated a substantial amount of its facilities and personnel for work on schizophrenia, including, in addition to clinical investigations, organization of a long-range multidisciplinary study of the biology of schizophrenia. Important advances in the Institute's laboratories were made during the year in such areas as an understanding of the contribution of the organic factors to pleasure, pain, anxiety and fright, effects of brain lesions on behavior, effects of parent-child relations on child development, sociological factors in aging, and addictive properties of new drugs.

The Institute's grant-supported research program continued to embrace a broad range of biological and behavioral studies, with appropriate emphasis on such key subjects as mental retardation, schizophrenia, psychopharmacologic approaches to study of mental illness in general, and mental health problems of later life.

The Psychopharmacology Service Center has served to encourage and stimulate much needed work on the use and effects of the newer drugs, in addition to that conducted and supported by the Institute itself. Opening of the new research facility at St. Elizabeths Hospital will enable the Institute to expand its clinical studies in psychopharmacology as well as in schizophrenia.

The Institute is also developing new programs to assist in the rehabilitation of mental patients who are benefiting from the new drug and other therapies. Mental health projects grants are supporting studies designed to improve the

treatment and speed the discharge of mental hospital patients. In some cases, studies are being supported to explore methods of providing service which may obviate the need for hospitalization.

In addition, consultation and assistance have been provided to State mental health programs in a variety of important areas including: Analysis of data essential to evaluation of new psychotherapeutic programs; establishment of alcoholism and drug addiction control programs; school mental health; programs for the mentally retarded; and mental hospital problems.

Plans for fiscal year 1959 emphasize the continuing adjustment of the Institute's activities and programs to new and emerging patterns of mental health needs, and the increasing use of broad interdisciplinary research attacks on mental illness, both in the intramural and extramural programs.

EFFECT OF HOUSE ACTION

The House approved an increase of $2,700,000 over the President's budget. Of this amount, $980,000 will be applied to grants for research in alcoholism and schizophrenia, and $1,300,000 for training grants in the areas of alcoholism, schizophrenia, other programs.

In addition $160,000 will be devoted to direct research in alcoholism and schizophrenia; $70,000 for review and approval grants; and $190,000 for professional and technical assistance, to be applied to alcoholism.

FORMAL STATEMENT

Mr. Chairman and members of the committee, in a moment, I would like to discuss some important emerging patterns in the mental health field. But first, I will summarize the fiscal aspects of our budget as it is before you.

For mental health activities in the fiscal year 1959 the budget proposal that is before you requests an appropriation of $37,697,000. This compares with $38,376,000 available for these same activities in fiscal year 1958. The apparent decrease is largely technical. The decrease is made up of $500,000 from grants for research projects due to the termination of the special 3-year study authorized by the Mental Health Study Act of 1955 (Public Law 281, 84th Cong.), and $179,000 from direct operations due chiefly to nonrecurring expenditures.

Last year there were substantial savings in research grants partly due to the fact that the psychopharmacology program did not get started as fast as anticipated. This year it is anticipated that most of the funds appropriated for this purpose will be spent. The training grant program has proceeded as planned; the increase in 1958 of about $1,300,000 has been utilized to develop essential areas in the growing program for developing professionally trained manpower. The most notable change in the intramural program has been in the cooperative project with St. Elizabeths Hospital. The structural changes in the new facility are almost complete and the scientist who was recruited to direct this activity has taken charge of the laboratory and is proceeding ahead of schedule with his staffing.

The request for mental health activities for fiscal year 1959 includes $11,902,000 for research grants, $546,000 for research fellowships, $13,300,000 for training grants, $4 million for grants to the States for mental health activities and other preventative and control services. It also includes $5,808,000 for intramural research, $591,000 for the review and approval of grants, $70,000 for inservice training activities, $1,221,000 for professional and technical assistance activities, including the work of the Psychopharmacology Service Center, and $259,000 for administration of the institute.

These funds are requested for expenses necessary to carry out the provisions of the Public Health Service Act as amended with respect to mental diseases.

SOME EMERGING PATTERNS IN THE MENTAL HEALTH FIELD

The experience of the National Institute of Mental Health over the last decade has greatly broadened its concept of the problems which are related to mental health. At the outset the major tasks were properly viewed as increasing the availability of adequate treatment, enlarging and improving the supply of trained mental health personnel, and mounting an expanded research program designed to solve many of the unanswered questions about mental illness. The Institute has made considerable progress in all of these areas.

In addition, though, other problems have become identified as wholly or primarily within the mental health field. One such problem is the application of psychiatric and mental health approaches to the alleviation of persistent social problems such as delinquency, retardation, and drug addiction. Then, too, we have become increasingly concerned with the prevention of mental illness and the promotion of mental health as a positive asset of man, and initial steps were taken to explore how the basic agencies and organizations of the community tend to increase or decrease the probability that the individual can achieve and maintain a high degree of mental health. To illustrate further—the Institute recognized the need to know how disasters and other extreme circumstances affect mental health and how the mental health status of people determines their ability to deal with these occurrences.

Developments such as these, serving to enlarge the horizons of mental health as a field, have caused the Institute to give careful attention to the area of program development. During our early years, emergent problems were handled as they appeared, but more recently the Institute has developed systematic methods for determining program areas which will require attention if this Institute is to carry out its total mission. The major device has been intensive staff work designed to clarify the problem, followed by planned coordination of various Institute programs directed to different aspects of the problem, and buttressed by research designed to supply answers where lack of knowledge deterred adequate approaches and programing.

The range of questions that have been studied in this way has been great. A large amount of work has been done on the problem of rehabilitating the mentally ill patient. Studies of the effect of the school and work situation on mental health have been initiated. The drug addict, juvenile delinquent, mentally retarded child, and the alcoholic have received attention. Major efforts, both intramural and extramural, have gone into the field of psychopharmacology. The psychological factors in accident causation and individual and group reaction to disasters have been studied. For the future there are additional problems that we know must be tackled, such as family disorganization and suicide. The results of these program development activities have been reflected in all of the operating programs of the Institute—research, training, and community services.

The areas that have been illuminated by these problem-defining techniques appear diverse and in some cases almost unrelated, but in fact they fall into four well-defined groupings:

1. The prevention or reduction of disability in pathologic or deviant populations (the delinquent, alcoholic, the clinically ill groups, especially the schizophrenic);
2. Processes affecting the mental health of large groups or entire communities (mental health education, child rearing practices, aging);
3. Processes affecting the mental health of specific populations in organizational settings (schools and the work setting); and
4. Mental health aspects of traumatic or stressful events in various populations (accidents, disasters, epidemics, etc.)

The early work in these areas, plus the fact that the areas of program development do form a pattern, make the Institute feel that it has made much progress in bringing its continuing programs in research, training, and community services to bear upon the problem of public mental health and that future orderly progress can be made to increase the contribution of mental health not only to the specific problems of illness but also to a large number of related problems.

Some new understandings of the bases of normal and impaired human functioning

There has been little agreement among people generally and even among research workers on such questions as whether human ability or disability is inherited or acquired, whether disordered behavior rests upon organic or life experience factors, and whether people grow old psychologically, physically, or both. The important fact is that hereditary influences and organic factors are properly viewed only as conditions of development. Except for the extreme case, they are not as limiting as previously thought. The organic factors are not presently subject to much change or manipulation in the individual; but the environmental factors are subject to control and have tremendous potential effects which are just now receiving recognition.

It appears now that some meaningful things can be said about these problems. It is common knowledge that inherited characteristics and organic factors are involved in every aspect of a man's body, mind, or functioning. It has long

been known, too, that as the individual develops and as his body changes, so does his behavior change. Today, however, it is becoming increasingly apparent that there is no simple one-to-one relationship between organic factors and the psychological functioning of the individual. Severe organic deficit is, of course, associated with badly impaired behavior and development. Short of such crucial defect, however, such factors as the situation in which one exists, the experiences he has, and the amount and kind of human interaction and support he has are of extreme importance to his psychological development.

This conclusion comes from several areas of study. There was a time when intelligence was thought to be a fairly constant attribute of an individual. There were bright children, average children, and dull ones. It was thought they would remain what they were at first. It was then discovered that orphans who were presumed to be dull became much brighter when adopted into good and loving homes, while those who remained in the institutions appeared to get even more dull. These studies were almost ignored for a time. Later, other workers followed children from normal homes for their entire childhood. They found that the brightest infant was not necessarily the brightest first grader. They found children who became progressively brighter and those who grew dull. It began to appear that what happened to the child affected his mental growth. He was born with a nervous system and an ability to learn from experience. How fast he learned and how much depended upon many things. Today we are inclined to view intellectual measures, especially in children, primarily, as indications of mental growth to date. The child may begin to get brighter or duller at any time. It appears now that the degree to which he is accepted and stimulated by others to achieve may be highly important in affecting his final level of mental development. It makes good sense, therefore, to talk about practices which maximize mental growth and those which retard it. It does in fact appear reasonable to say that improved child-rearing practices and educational advances can raise the achievement levels of all of our children except those with extremely severe organic defect.

At the other end of the life span, there are comparable results derived from study of the aging process. Some people become senile as they grow old and others do not. For a long time it was thought that these differences depended upon the amount of cerebral arteriosclerosis that had developed. Surprisingly, though, post mortem studies show that some people who were alert and vigorous until time of death show considerable physical change of the brain and that some very senile-acting people have fairly "young" brains. Again there are limits. The important point is that behavior is not tied tightly to organic characteristics. Those who retain a place in life and a pattern of interaction with people, who have interests, activities, and responsibilities, tend to show relatively few of the behavioral signs of senility. Those who step aside or are pushed aside, who lose their place in affairs, who really have "nothing to do" tend to behave like senile people. In other words, even the impaired and aging human body can perform pretty well when it needs to do so and when there are strong social and emotional satisfactions for doing so.

The effects of trauma give the same picture, even when brain tissue is involved. The ability of people to compensate for many kinds of bodily injury and loss is well recognized, but now it appears that surprising ability exists to overcome even the effects of permanent brain damage. Except for extreme cases the human being seems to regain function even though he cannot regenerate actual nerve cells. The brain is apparently very adaptable, and relearning in the brain-injured individual is often astounding—when such relearning has meaning for the person in his total life situation.

It is of some importance to compare studies of animals and men in this connection. By and large, animals do not show as much ability to regain function after brain damage as does man. It is in the higher mammals, such as chimpanzees, that it does occur, and here, too, it appears to be partially related to the social context as it is in man.

In the clinical area there are findings that indicate that the schizophrenic patient can operate at near normal levels under optimal conditions of social stimulation, although he may regress again if the favorable circumstance deteriorates. This fact justifies the large amount of effort the Institute has expended upon this aspect of the schizophrenia problem, in addition to its extensive work on the problems of clinical care and the biology of this illness.

What has been said here is of great significance. It represents no effort to deny the reality or importance of organic and biological factors in determining

the way man grows, develops, behaves, and achieves. It has become clear, however, that social stimulation and support, motivational influences and the psychological needs of the individual also determine the level to which the person will develop, the degree to which he will overcome organic deficit (whether it be congenital or acquired), and the degree to which he realizes his potentialities (whether he be normal or in some way handicapped). It means that perhaps only a few people reach anything like their optimum level of achievement and development.

The fact that one's behavior is not a mere reflection of his physical and organic nature is extremely fortunate. It means that handicap of a physical and organic nature is not always as limiting as might be assumed. By learning how human interaction, motivation, and the social circumstances of life can contribute to development and recovery, much hope exists even for those cases of congenital or acquired organic defect that do not yield to continuing efforts to prevent them. It means also that normal people have potentialities for productiveness and usefulness much greater than has been thought before. It means that the promotion of mental health as contrasted with treatment of the ill or the prevention of clinical disorder is a reasonable prospect to which the psychological and social sciences can address themselves with realistic hopes for success.

It is conclusions of the kind reported here that make exciting and interesting such tasks as rehabilitation, work with the retarded, and efforts to alleviate the problems of aging. Results will not pour in overnight, but the Institute feels that the program development areas outlined above represent ones in which great promise exists because of the kinds of research findings that have been reported and which are continuing to accumulate. The remainder of this statement contains a résumé of the Institute's work in these areas, together with some of the more important developments in research, training, and community service activities.

TRAINING ACTIVITIES

The work of improving the quality and the quantity of trained professional personnel needed for mental health research and services continued at full pace during the past year. A special report of the Institute's training program from 1948 to 1957 is being prepared at the request of the Congress. This report will provide details about the major objectives and accomplishments of the Institute's training activities. A major purpose of this program has been to train people for leadership in research, teaching, public service and administration, and community mental health work. Responses from approximately 3,100 of the 3,800 individuals who have received support under the traineeship program from 1948 to 1956 show that between 75 and 80 percent are now occupied in one of these important mental health careers.

There has been increasing recognition of the need to develop still more broadly trained biological and behavioral scientists to conduct important research and to contribute their skills through teaching and service in the major mental health problem areas. As one means of meeting this need, the Institute is now preparing to supplement its research fellowship program by providing training grants in any area of psychology where it is demonstrated that the individual will contribute through research or through services to public mental health programs. This will mean increased support of training for developmental or child psychologists, social psychologists, physiological psychologists, and psychopharmacologists. Such people, once they are trained, not only will find careers in essential areas of research, but will be able to contribute to the solution of pressing mental health problems such as those encountered in use of the tranquilizing drugs and in the area of school mental health.

The Institute's mental health career teacher program, initiated in 1956 as a means of encouraging outstanding men and women to choose academic careers as educational leaders in the mental health disciplines, is now operating on a firm basis. Thirty career teachers in psychiatry, clinical psychology, psychiatric social work, and psychiatric nursing are currently being supported.

Two new training programs were initiated in 1957 and are continuing in 1958. One, a senior stipend program, is designed to help a limited number of outstanding individuals, currently in teaching, research, or administrative work, to secure advanced mental health training on an interdisciplinary basis. Five individuals are now receiving such senior stipends, in addition to 10 individuals receiving advanced research training through the special research fellowship mechanism.

The other new program is aimed at providing basic science students with research training in the mental health disciplines. Sixty-five chemistry, pharmacology, physiology, endocrinology, and other science students are now receiving this training. This is in addition to the $546,000 being spent in support of approximately 146 predoctoral and postdoctoral students in the research fellowship program.

Funds requested for fiscal year 1959 will enable the Institute to maintain the present level of support to training institutions.

RESEARCH

The Institute has continued to move forward in the intramural research work conducted with its own staff and facilities and in its support of research through grants to scientists throughout the country. Highlights of the accomplishments of this research work are presented in a separate document. Funds are requested to continue these research programs at substantially the same level as in fiscal year 1958.

Biology of schizophrenia

The Institute has reallocated a significant share of its intramural research funds to develop a systematic study of the biology of schizophrenia, which remains the biggest problem area in the field of mental illness. Though many positive findings about the nature of schizophrenia have been contributed by every biological discipline, no pathological change is generally accepted as characteristic of the disease or as fundamental to the disease process. Studies of uniovular twins strongly suggest a genetic element in a large proportion of schizophrenia. There is some evidence of EEG abnormality, but little evidence of endocrinological or circulatory changes. In the field of biochemistry, there has been much emphasis on protein and amino acid metabolism. However, hypotheses (advanced during the past year) that a disordered metabolism or epinephrine or an abnormally high proportion of ceruloplasmin are related to schizophrenia were disproved by an Institute investigator, who demonstrated that these factors are related to the patients' blood level of ascorbic acid, and are thus a function of diet rather than of mental illness.

What is needed is a comprehensive and integrated study of physiological changes correlated with schizophrenia. Up to now, there have been two principal impediments to research on the biology of schizophrenia. One has been the fact that diagnosis of the disease is entirely clinical and based on symptoms. The samples of patients chosen for study may actually have included examples of different diseases with a common symptomatology. Another major problem has been the inability to control nondisease variables. For example, control groups in biological studies of schizophrenia have often been selected from among individuals who differ from the patient group in many ways other than the mere absence of mental illness.

With the new research techniques, the new leads, and the new sophistication about research methodology built up by the contributions of all previous investigations, the time is now propitious for a major effort in research on the biological aspects of schizophrenia. To this end the Institute's Laboratory of Clinical Sciences has been preparing and is now geared to undertake a long-range multidisciplinary program of studies in this field. It will attempt to discover how the schizophrenic differs from the normal person, the etiology of these changes, and ways in which the process can be reversed.

Adult psychiatry

The Institute's adult psychiatric-research work has continued to be concentrated on the basic psychiatric problems of schizophrenia. These studies have brought new knowledge about the nature of family and other environmental influences contributing to the development of psychiatric disturbances. Experimental treatment methods and new ways of managing patients have been utilized in investigations aimed at altering the course of the disease and promoting recovery. One group of studies has led to preliminary hypotheses about the nature of familial influence on the development of schizophrenia. These hypotheses will serve as the focal point for further research on families of schizophrenics and neurotics, and on larger and more varied samples of families, including those of normal individuals. The Institute's clinical research workers have also continued to seek better understanding of the factors influencing normal personality development and behavior.

Additional work in clinical psychiatry and in the behavioral sciences is being planned and will be initiated in the Institute's new Clinical Neuropharmacology Research Center which will be opened at St. Elizabeths Hospital this year. Utilization of this unique facility not only will permit the application and testing of findings, but is also expected to generate new hypotheses.

Laboratory research

The laboratory research at the Institute continues to accumulate specific and highly specialized findings that feed into a thorough understanding of mental illness. These findings are highly technical but highly valuable to the research worker and the skilled therapist. Studies of biological methylation, amino acid metabolism, and comparative biochemistry have advanced understanding of the biochemistry of mental and neurological disease. Physical chemists are investigating various aspects of nucleic acids which appear to have an important role in memory, heredity, growth, reproduction, and many other interrelated aspects of health and disease.

Researchers in the Institute's experimental animal laboratories, studying the effects of brain lesions on social behavior of primates, have discovered important differences in the way in which similar lesions affect monkeys and chimpanzees. The work of this laboratory indicates that the social behavior of animals following brain damage may depend not only on the location and extent of the damage, but also on the nature of the animal's social environment before and after the operation. This finding has important implications for the treatment and rehabilitation of humans.

One Institute neurophysiologist has developed a refined and more accurate technique for measuring the electric potential of nerve tissue. Another neurophysiologist, studying neuronal integration in the monkey, has explored the regions concerned with pleasure and compulsive activity, negative emotions and pain, anxiety, and fright. During the past year the Institute opened a new section on limbic integration and behavior which will study brain mechanisms fundamental to psychology, psychiatry, and neurology.

Research in alcoholism

In its own research laboratories, the Institute is carrying on a large number of studies on biology and human development which have relevance to the problems of alcoholism. The Institute's Addiction Research Center, in particular, is studying physiological, organic, psychological, and social aspects of the problem. It was this center which first demonstrated the physiologically addicting properties of alcohol when consumed in excessive quantities. In addition, Institute grants are supporting research investigations on biochemical and psychological aspects of alcoholism, and on clinic and rehabilitation programs for alcoholics. Because the use and abuse of alcohol is highly influenced by cultural and social factors, the alcoholic cannot be understood as an isolated individual; he must be understood as part of a whole complex of alcohol usage patterns. A study of alcoholism in this context is now being planned by one State, and the Institute is collaborating by providing consultation and assisting with research design.

Research on drug addiction

During the past year the Institute's Addiction Research Center at Lexington, Ky., found that 3 of 5 new analgesics tested had sufficient addiction liability to justify limiting their distribution in accordance with the Harrison Narcotics Act. The center continued its studies of normorphine, a drug which has proved useful in counteracting accidental opiate poisoning and in simplifying withdrawal from morphine addiction. Since normorphine has the least addiction liability of any drug in the morphine series, and since tolerance to it develops relatively slowly, it is being studied very carefully in the continuing search for an effective, nonaddictive analgesic.

The Addiction Research Center is continuing its work on chronic barbiturate and alcoholic intoxications, and in the biochemistry, neurophysiology, and neuropharmacology of addiction. The metabolism of morphine is being compared with that of normorphine, and plans are underway to study changes in epinephrine and norepinephrine (critical hormones released by the brain and central nervous system) during cycles of addiction.

Work on the psychology of addiction includes an attempt to develop tests which will permit the accurate measurement of such subjective factors as pleasurable effects of different classes of drugs. A lever-pressing test for rats was developed to measure the reduction in anxiety caused by analgesics and their relative

potency. It was found that morphine totally abolishes anxiety in anticipation of a painful stimulus.

Research on aging

A major problem of older persons in our society, aside from economic and health problems, is the problem of loneliness. Most older persons do not have enough to do, and this affects their mental health as surely as do physiological changes. Institute investigators from 12 different laboratories, who for the past 2 years have been making an intensive study of 50 healthy aged men, are turning up findings that indicate psychological processes occur independent of changes in the biology of the nervous system. There are many reports of older persons who function normally although they have the same neuropathological processes as those who die of senile dementia. The mental health problems of older people are directly related to their ability to make adjustments that may differ widely from those they have been accustomed to make throughout their lives. Whether they can do so depends upon the opportunities offered by the community as well as the preparations they have made for their later years. The Institute therefore is studying the socioenvironmental factors in aging and is carrying on a multidisciplinary program of activities that relates the mental health problems of aging to those of human development in general.

To date, out of fiscal year 1958 funds, 17 research grants in aging are being supported for a total of $535,117. Among the grants awarded last year was one for the establishment of a center for aging research at Duke University which will permit a universitywide concentration of facilities and talents on fundamental research in this area. The center will train and interest investigators to do work on aging, and serve as a regional resource to disseminate useful information about better health and care for the aged and to provide scientific knowledge about aging to State and local governments and private groups. This project is being supported jointly by the National Institute of Mental Health and the National Heart Institute.

Studies on aging in the Institute's own laboratories have demonstrated a slowing in response with advancing age that is independent of motivation, and an increased latency in all voluntary responses which point to changes in the central nervous system. Investigations indicate the possibility that senile nervous diseases are characterized by decreased ability to inhibit previously established responses. In other words, older people can learn, but it is harder for them if they have to do some "unlearning" first. New knowledge about the neurophysiological mechanisms controlling sensory "input" into the nervous system possibly has significant implications for understanding the relationship between learning, perception, and experience. Institute scientists working on an interdisciplinary study of cerebral metabolism are also making substantial contributions to the physiology of aging. Other research workers are conducting collaborative studies with other Institutes and the aging program of the National Institute of Mental Health is being coordinated with the activities of the National Institutes of Health's Center for Aging Research and the aging program of the Department.

Grants and research fellowships

Research work being supported by the Institute embraces the many biological and behavioral sciences in which clues must be sought for the causes of mental illness and for more effective treatment and preventive measures. Some grantees are conducting basic studies on the functioning and structure of the brain, brain chemistry, the relation of physiological processes such as blood pressure and heart rate to behavior, psychosomatic reactions, and the effects of very early learning (the so-called imprinting process) to later behavior. Others are studying the mental health aspects of such social problems as juvenile delinquency, retardation, and alcoholism. Many clinical studies on schizophrenia and other mental and emotional diseases are also being supported. To date this year, 123 projects totaling $2,894,000 are directly related to the problems of schizophrenia; almost half represent psychopharmacological approaches to this major problem. In addition 89 basic studies in such areas as neurophysiology, biochemistry, psychology, and sociology which have relevance to an understanding of schizophrenia are also being supported in the amount of $1,686,000; one-third of these fall in the area of psychopharmacology.

In addition to supporting individual research projects, the Institute is providing long-term support for proven investigators who are concentrating on key

mental health areas, and is supporting major interdisciplinary team research work. One example of this is the center for aging research at Duke University. Another example of long-term support is a major 5-year grant awarded last year to the University of Michigan and the Ypsilanti State Hospital for a program of basic neurophysiological and psychopharmacological research. Combining research and clinical facilities, this broad approach holds promise for advances in the diagnosis and prognosis of mental illness.

The research fellowship program continues to provide valuable research training for individuals in all fields of biology, medicine, and the behavioral sciences as they relate to problems of mental health and illness. In 1958, approximately 146 students are being given advanced research training at both the predoctoral and postdoctoral levels, including 10 scientists who are receiving advanced research training through the special research fellowship mechanism. It is planned to continue this level of support in 1959. Information received from a followup study of the 449 individuals supported under the research fellowship program from 1948 through 1956 shows that 86 percent of the former fellows are now engaged in research work.

The mental health career investigator program, which was established in 1954 to assist in opening research careers to qualified young psychiatrists and scientists in related fields, and which provides 3 to 5 years of support for full-time research and further development of research skills, is now supporting 17 such individuals, with an additional 5 under active consideration for support out of 1958 funds. These individuals are selected from among the most promising and talented young scientists in the country; all are currently engaged in mental health research and plan to continue in these endeavors after termination of their grants. A number have already been approached to fill important research positions and it is believed that all give high promise of making significant research contributions in the future to our understanding of mental illness.

Biometrics research and consultation

During the past year, the Institute's staff of biometricians developed new techniques for gathering and analyzing data on trends in the movement of mental hospital and clinic populations. As more new therapeutic programs (drugs, use of day and night hospitals, half-way houses, open hospitals, etc.) and treatment facilities are introduced into hospital and community programs, the task of obtaining data on people under treatment becomes increasingly important in order to assess the effectiveness and value of these treatments. The task also becomes increasingly difficult and complex, and data derived from separate treatment facilities, such as public mental hospitals and clinics and psychiatric services in general hospitals, become increasingly difficult to interpret. The Institute therefore will intensify its work with State mental health and State mental hospital authorities to develop statistical reporting programs that will coordinate basic data on patients under treatment in all known psychiatric facilities in their jurisdictions.

PSYCHOPHARMACOLOGY

Psychopharmacology Service Center

Organized in the fall of 1956 to meet the needs posed by the rapid increase in the number of psychopharmacologic agents and their widespread use, the Institute's Psychopharmacology Service Center has, in a little more than a year, established a sound organization for advising on, coordinating, and stimulating needed research in this field. In addition to its services in connection with drug studies in hospitals, the center and its advisers are stimulating and assisting in studies of drug effectiveness on neurotic and other nonhospitalized patients. Investigators are being assisted with research problems on an individual basis, but the center also plans to stimulate research by providing assistance and consideration to groups of scientists who may wish to conduct coordinated research in special areas.

Solutions are being sought to a number of key problems, such as (1) how accurately to measure change in patients treated with the new drugs; (2) the influence of environmental factors, aside from the drugs, on the outcome of therapy; and (3) ways of shortening the time needed to reach definitive results in a study, as well as ways of assuring that meaningful reports of studies will be made available to other investigators as rapidly as possible.

Support of research in psychopharmacology

In addition to work being done by the Institute itself, 69 research grants in the field of psychopharmacology are being supported for a total of $1,536,868. Another 34 projects totaling $775,000 are pending review at the March meeting of the National Advisory Mental Health Council. The research supported includes basic and clinical studies of drug mechanisms and effects; attempts to synthesize new psychopharmacologic agents; psychological studies of drug action in man; biochemical mechanisms of drug action; and investigations of some of the basic biochemical activities of the nervous system as a means of understanding the nature and optimum usefulness of these drugs.

Research in psychopharmacology at the Institute

Institute research in this field includes electrophysiological studies of drug action which have shown clear-cut differences between the effects of hypnotic and ataractic drugs on the cerebral cortex. Other animal studies indicate that centrally acting drugs which appear to depress activity in the brain-stem impair performance on manual tests; this is significant since it differentiates between cortical and subcortical subgroups. In another attempt to study behavioral effects of psychopharmacological agents, an Institute scientist has devised a visual discrimination test for experimental animals which clearly shows the effects of a number of drugs and will be extremely useful in the study of behavior in general. Clinical psychologists at the Institute are comparing the effects of such drugs on intellectual, motor, and perceptual skills in normal individuals and in schizophrenics. Other workers at the Institute are attempting to assess the effect of the patient's social background on his response to drugs, and the extent to which improvement in mental hospital patients in drug studies is a result of changed ward environment or of the drugs.

The new research facility at St. Elizabeths Hospital will provide a clinical laboratory for controlled large-scale trials of pharmacotherapeutic agents and for intensive studies of drug action in normal man in various types of mental illness, with special emphasis at this time on schizophrenia and the depressions. The impact of pharmacotherapy on existing services in the mental hospital, and the need for new rehabilitation measures and for increased contacts between hospital and community will be studied.

Outlook for future work in psychopharmacology

From the basic and clinical research done thus far, two major problems have emerged which require additional time for solution. There are not enough sound research workers in adequate clinical settings to permit rapid expansion of clinical work in psychopharmacology. This points up the urgent need for training such personnel. The other major problem is the inadequate understanding at the present time of the diseases being studied. For example, drugs with the same effect on a particular biochemical or neurophysiological mechanism in the body may have different effects on behavior, while drugs with the same clinical action may affect a given mechanism differently. Behavior effects are complex patterns of change, depending on the drug administered, the environment, the patient's life experiences, and even the activities of the observer. The Institute, therefore, is requesting funds to permit exploratory work and evaluation at the present level for a year or two, after which necessary adjustments will be made in the program prior to further expansion.

MENTAL HEALTH OF CHILDREN

Child development

The Institute has been conducting a broad range of normal child development studies, including the effects of social environment on learning, the effects of family and community influences on general development, comparative studies of babies in normal homes and in institutions, the relationship of mother's personality to the personality and development of children, and the effects of individualized attention on responsiveness in infants.

Institute investigators have devised a means of objectively measuring attitudes of parents toward children and child rearing. This test, known as the Parental Attitude Research Instrument, is being used in our laboratories and in laboratories throughout the country to study the relationships of such attitudes to parent-child relations and to child development. It has already shown some interesting correlations between parental attitudes and emotional and social adjustment of children, including children's activities and intelligence scores

and may play a role in the complicated problem of predicting personality development.

Delinquency and emotional problems

Support of research on juvenile delinquency continues to be an important Institute concern. Twenty research projects totaling $600,403 have received support to date in fiscal year 1958. A clinic in Boston, assisted by a mental health grant, is making an intensive diagnostic study of hyperaggressive, incontrollable boys and their families. Other centers, with the aid of grants, are attempting to develop improved techniques for diagnosis and treatment. One center is studying a group of 50 delinquents who had come before the juvenile court during 1957, and another is concentrating on the effects of the family and social situation.

During the past year, the Institute opened its new Children's Treatment Center and transferred to it the group of emotionally disturbed boys who had been under study at the Clinical Center. The new treatment center is a cottage-type residential facility where the children, who have now recovered to the point where they can attend school and lead a more normal life, are being studied in terms of therapeutic milieu. In the meantime, new groups of children with other types of severe emotional disturbances are being studied in the Child Research Branch's Clinical Center ward facilities.

Institute researchers working with hyperaggressive children find that these children (1) display a unique kind of pathology that combines aspects of childhood neuroses and psychoses; (2) show intense anxiety about the possibility of being dependent; and (3) have severe problems in developing a sense of their role in society. Progress is being made in analysis of learning disturbances in these children, and in developing and improving therapeutic techniques.

Mental health in the school setting

Because of the school's crucial role in building the foundation for individual mental health, the Institute has increased its efforts in this direction and is now supporting a large amount of research on school mental health. Recently a major study was initiated in which a teacher-training institution will investigate the psychological aspects of the events and processes that take place in the classroom, the school, and the community to determine their effects on the children's mental health and on the educational efforts of the school.

The Institute is developing plans, in its training program, to encourage the addition of more functional knowledge about the behavioral sciences in the preparation of teachers to help them deal with emotional problems encountered in a classroom setting. An Institute psychiatrist is devoting full time to consultation with schools, assisting them in applying knowledge currently available. Working in cooperation with the State board of health and department of education, the Institute has helped one State set up a case-finding program, to demonstrate ways and means by which communities can detect and manage minor mental health problems in schoolchildren.

Investigators at the Institute's Mental Health Study Center, conducting a followup study, have found that reading disability is related not only to the child's intellectual development, but even more so to his emotional difficulties, and that these difficulties usually presage a high dropout rate from school. The goal of this and other similar studies is to learn how the schools can best minimize the effects of emotional problems already present and prevent the development of others.

Mental retardation

To date, during fiscal year 1958, the National Institute of Mental Health has supported a total of 19 research grants directly in the field of mental retardation for a total of $493,536. These investigations range from studies of amino acid metabolism and phenylketonuria and the role of heredity, to studies of diagnostic and learning problems in retardation.

A number of basic research investigations in the Institute's laboratories are concentrated on the biochemical and neurophysiological aspects of retardation. In addition, NIMH scientists are cooperating with research workers from other Institutes, including the National Institute of Neurological Diseases and Blindness and the National Institute of Arthritis and Metabolic Diseases.

Institute funds are being used to train professional personnel needed to do research on retardation and to work with the retarded. Consultation and assistance are being provided to States and local communities in the establishment

and development of programs for the mentally retarded, and a portion of Federal grants-in-aid funds is being allocated by the States for special projects on mental retardation.

CARE OF THE MENTALLY ILL

Mental health projects grants

New trends in psychiatric care stress the importance of hospital-community interrelationships not only in helping patients readjust following hospitalization, but also in developing services that obviate the need for hospitalization or that may help make the hospital experience more therapeutic. Under its mental health projects grant program, authorized by Public Law 911 passed by Congress in 1956, the Institute has begun to support whole new groups of studies and demonstrations in the treatment of the mentally ill; 44 projects for a total of $1,385,306 have thus far been granted out of the $2 million available for this purpose in fiscal year 1958. Studies are being supported under this program in 18 States, Hawaii, and Puerto Rico. The range of subjects is broad and includes such important areas as a day-hospital program for psychotic children, use of public health nurses in the supervision of convalescent psychiatric patients, a study of alternatives to hospitalization, providing comprehensive psychiatric services in a geographically isolated area, referral services in a large urban area to provide immediate psychiatric help for individuals who threaten suicide, and the use of practical nurses and other nursing personnel as a way of overcoming the shortage of professional nurses in State hospitals. Funds requested for fiscal year 1959 will permit the support of this program at the current level.

Hospital consultation service

In addition to this new program, the Institute has accelerated its consultation services to mental hospitals. Through this assistance new program ideas and improved patterns in the care of mental patients are beginning to become widespread. Some of the more important of these are the establishment of psychiatric facilities in general hospitals, and the development of aftercare facilities and programs operated by hospitals or by voluntary and public agencies in the community.

Rehabilitation studies

The Institute's vital concern with the problem of rehabilitation of the mentally ill continues to increase as new and more effective treatment methods increase the rates of discharge from mental hospitals. A pilot study of rehabilitation and rehabilitation personnel supported by the Institute at a State hospital has shown that chronic patients tend to become adjusted to the hospital and resist rehabilitation efforts. Another Institute-supported study on the posthospital experience of the mental patient is exploring the important area of bridging the gap between hospital and community. The past year saw the publication of an important work in this field, The Patient and the Mental Hospital, which comprises the research contributions made by outstanding authorities at the Institute-supported conference on socioenvironmental aspects of patient treatment in mental hospitals.

During the past year scientists on the Institute's staff have begun studies in this area. This work will be expanded in the coming year when the Institute will have additional facilities in its Clinical Neuropharmacology Research Center being opened at St. Elizabeths Hospital.

ASSISTANCE TO STATE PROGRAM DEVELOPMENT

The Institute is continuing to expand its general technical assistance and consultation activities to State and local mental health programs, in addition to its special services to mental hospitals, school mental health activities, and work on aging, alcoholism, and other mental health problem areas. Institute staff are cooperating with a wide variety of national and international agencies and organizations on such diverse problems as mental health in rural areas, services for aged persons, juvenile delinquency, and mental retardation. Institute regional staff, working with the Southern Regional Education Board, were instrumental in setting up the first regional program to train school psychologists.

The program of technical-assistance projects was continued to assist States with particular mental health problems and to help them develop new program areas. A course on community mental health programs for State-level staff will

be started this year, and central consultation services on research and evaluation of mental health programs have been established.

Stimulated and assisted by grants-in-aid and technical assistance from the Federal Government, the States have been making substantial progress in the development of mental health programs. A number of States are also expanding their training and research activities in mental health. During the past year, continuing the steady trend of the past 10 years, the States increased the total funds budgeted for mental health program activities.

Alcoholism control activities

As the focus of Public Health Service activities in the field of alcoholism, the National Institute of Mental Health has been integrating work in this area into all of its various programs, and has helped to stimulate State and local community alcoholism control activities. Some States use part of their Federal grant-in-aid funds for alcoholism programs. A full-time consultant on alcoholism provides guidance and technical assistance in the development and expansion of such activities, and the consultant staffs in the regional offices assist in serving as a source of information and a clearinghouse on problems of alcoholism. The institute has been cooperating with other interested organizations, and has supported research conferences in the field. Early in calendar year 1958, the institute, in cooperation with the Bureau of State Services, plans to call a national conference on alcoholism.

Addiction control activities

Research during recent years on the social and psychological aspects of addiction has demonstrated that social background must be considered if treatment and rehabilitation of the addict are to be successful. As a demonstration of how this new knowledge can be applied to a control program, the Institute during the past year established a narcotics addiction demonstration center in New York City to work with patients discharged from the Public Health Service Hospital in Lexington, Ky. The center helps former addicts utilize local health and welfare facilities, and provides psychiatric consultation to these agencies so that they can better meet the needs of the ex-patients. In the few months the center has been open, it has succeeded in securing cooperation from practically all the community agencies involved. This is a big step forward, since the tendency has been to let the former addict shift for himself—with relapse the almost inevitable result. The center is also studying readdiction rates, and social, and psychological factors that make for "cure" or relapse.

CONCLUSION

Significant progress has been made during the past year in mental health research, in training needed personnel, and in developing and expanding services. Important advances have also been made in defining and enlarging basic understanding of key mental health problems. The program and approach of the National Institute of Mental Health are now helping to develop increasing and more effective tools for the prevention and control of mental and emotional illnesses.

TRAINING REPORT

(The letter transmitting the training report follows:)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
PUBLIC HEALTH SERVICE,
NATIONAL INSTITUTES OF HEALTH,
Bethesda, Md., April 10, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Labor-Health, Education, and Welfare,
Committee on Appropriations,
United States Senate, Washington, D. C.

DEAR MR. CHAIRMAN: The report of your committee on the bill containing appropriations for our Department for the current fiscal year (S. Rept. No. 416, June 7, 1957) requested the National Institutes of Health to prepare a definitive document on training in the field of mental health. The request specified that this document should include:

1. The basic philosophy of the Institute's training programs as they have emerged over the past 10 years;

2. A survey of what has been accomplished over this period of time, separating, where possible, training for service from training for research;

3. A detailed description of the National Institute of Mental Health training program in 1957 and 1958; and

4. A careful appraisal of the training needs in this field, as visualized for the coming 5-year period.

I am happy to transmit herewith a report which I believe covers each of these aspects of your committee's request.

In addition, your committee has requested that we provide (*a*) information about the impact of the program on medical education, and (*b*) a description of the resources of the United States as a whole, together with a statement of how these resources can best be utilized in an all-out effort to improve the situation as it exists today. With regard to the first of these, preliminary steps are being taken to carry out a comprehensive study of the impact of the program on medical education. With regard to the second of these requests, information about the resources of the country as a whole will be derived from a study now being carried out under the direction of the Joint Commission on Mental Illness and Health as authorized by the Mental Health Study Act of 1955 (Public Law 182, approved July 28, 1955). Rather than duplicate the work which the Joint Commission is doing with major support from congressional appropriations, we thought it wise to await the results of their studies, which are expected to be available by the fall or winter of 1958. We will see that their published results are immediately made available to the committee, together with Institute comment as appropriate.

The appraisal of future training needs, contained in section VI of our report, is addressed to a general 5-year projection of needs and is not geared to the requirements of any particular fiscal year or years. The translation of this projection of needs into budgetary estimates for any fiscal year was considered to be outside of the mission of the professional and technical group which compiled and prepared the data for this report.

I trust this report will supply the information the committee sought. We will, of course, be glad to provide any supplemental data that may be needed.

Sincerely yours,

R. H. Felix, M. D.,
Director, National Institute of Mental Health.

Summary of Mental Health Training Report

This report presents a comprehensive review of the National Institute of Mental Health's training program at the end of its first decade of operation. Mental health training has improved both in quantity and quality during these 10 years, and the Institute's program is accomplishing the objectives for which it was established.

Initiated as an attempt to cope with the overwhelming demand for trained clinical specialists, the program has grown far beyond its original conceptual limits. At first support was confined to training programs for specialists in the generally recognized mental health disciplines, plus a modest program of training research personnel. As new needs became apparent, however, and as new opportunities arose for meeting the basic problems of mental health and mental illness, the program was expanded into new areas of activity. The Institute in its training program has tried to do more than merely catch up with the accumulated need for personnel that has been built up over a long period of years. It has shown consistent willingness to explore new types of training, and has tried to develop fresh approaches that will exploit the full potentialities of new techniques and new groups of personnel for contributing to the field of mental health.

Two years after the training program started, a new series of grants was initiated for the purpose of supporting special programs designed to improve teaching methods in the basic mental health disciplines and to develop training programs in key mental health problem areas such as alcoholism, gerontology, and mental retardation. In the next 2 years, during 1950 and 1951, four other new training programs were developed. The first of these, designed to equip the general physician with the knowledge necessary for dealing with emotional problems encountered in medical practice, has become one of the Institute's principal tools for coping with mental health needs. The second has brought to public health personnel, since 1951, knowledge about the mental health aspects of public health and training that will equip them to contribute to community men-

tal health programs. The other two new training programs, in pediatric psychiatry and neurology, were terminated after a 3-year period in which they had accomplished the experimental purposes for which they were developed.

After the first 5 years of operation, the Institute made an appraisal of its training programs during which it was decided to take active steps toward insuring the possibility of further growth and development. As a result of these decisions and of increased appropriations for training, the program has had a new degree of freedom, since 1952, in reaching out for additional ways of expanding the mental health resources of the Nation. Among the results were:

1. Pilot projects to develop ways of training specialists to work in key mental health problem areas.
2. Grants to enable promising psychiatrists and scientists to devote themselves to careers in mental health research.
3. Grants to enable qualified individuals to make a career of mental health teaching.
4. Psychiatric teaching for undergraduate nursing students to equip nurses to deal with the emotional aspects of health and illness.
5. Training of specialists for community mental health activities.
6. Senior stipends for advanced mental health training of established teachers, researchers, and administrators.
7. Part-time stipends to give medical students experience in psychiatric research and clinical work.
8. Training programs in mental health research for personnel in the basic and applied sciences.
9. Institute participation in:
   (*a*) The training of epidemiologists and biometricians for medical research.
   (*b*) The postsophomore research fellowship program for medical students.
   (*c*) The postdoctoral fellowship program for outstanding foreign scientists.
10. A series of new grants to train social workers and psychologists to do vitally needed mental health work in school systems.

Current plans for fiscal year 1959 include the inception of new grants to support doctoral programs designed to increase the reservoir of research psychologists and to develop programs in key problem areas that are hampered by acute personnel shortages. In addition to all of the above ways of meeting the need for trained personnel to do mental health work, the Institute's research grants program has made a considerable indirect contribution in providing valuable research experience for a large number of student research assistants.

Between July 1, 1948, and June 30, 1957, a total of $33,650,156 was expended for the support of training in the field of mental health. A survey of the use of these funds through June 30, 1956, showed that 93 percent of the total was expended for direct costs of personnel; of this 93 percent, 61 percent went for teaching personnel and 39 percent for the support of individuals in training. Another survey conducted in the spring of 1957 revealed that, of the 3,939 persons who received training under the Institute's traineeship program, 70 percent were engaged in their professions in public agencies or as teachers or research workers in mental health disciplines, 13 percent were still in training, only 7 percent had left the field, and almost all of the remaining 10 percent, in private practice, were devoting some time to public service. In addition, for the period from July 1, 1948, through June 30, 1957, a total of $2,286,606 was expended in the research fellowship program, providing support for 424 fellows for periods of 1 to 4 years. Of 170 former fellows on whom followup data were recently obtained, 146 or 86 percent have continued in research. Finally, for the period from July 1, 1954, through June 30, 1958, a total of $943,334 will have been expended in the career investigator program for the support of 20 investigators for 3- to 5-year periods. All investigators are still engaged in research work and training under this program.

The Institute's forecast of training program needs for the next 5 years lays heavy emphasis on the importance of increased training for individual research workers, and the development and expansion of new research training programs at training centers. The latter would include establishment of basic science departments of human behavior in medical schools, and of improved research training for university students early in their professional or preprofessional training program. Also needed is training of personnel for preventive mental

health work in the community and for treatment and research work in geriatrics, alcoholism, juvenile delinquency, and mental retardation. Graduate training needs to be maintained, at least at its present level, and undergraduate training in medical and nursing schools should be increased. Other training programs will expand as training centers become strengthened. There is particular need, in this connection, to allow these centers sufficient time to make the necessary changes in curriculum and teaching personnel. Although the needs for mental health personnel are acute, the training program, to date, has been fulfilling its goals. The prospects for eventually meeting the needs are now more hopeful than ever before.

An Appraisal of the National Institute of Mental Health Training Program Needs for the Next 5 Years

Mental illnesses represent an interaction of experience and constitutional or biological factors. Any program, whether in training or research, which emphasizes one of these approaches to the exclusion of the other fails to exploit fully the potentialities of science for understanding disease. In view of the complex nature of the problem, the training program of the National Institute of Mental Health has stimulated and encouraged the development of professional and scientific personnel from the disciplines of psychiatry, psychology, social work, nursing, and the social sciences, as well as the biological sciences. Future programs will continue to emphasize this interdisciplinary approach.

In the course of developing training programs during the past 10 years, it has become quite clear that training must extend beyond preparation for clinical work. The professional person often must function as a teacher, an administrator, a research worker, or as a consultant on community mental health problems. The training grant program of the National Institute of Mental Health to date has been focused primarily on the necessity for preparing clinical personnel to meet these overwhelming demands. Attention also has been given to training and recruiting teachers through a career teacher program, and improving the quality of instruction through a senior stipend program. The high level of the programs supported has led to the development of a group of leaders and persons capable of fulfilling administrative and consultant roles.

The major area in which further program expansion is vitally needed at this time is in the training of individual research workers. Valuable support has been given for the training of individual workers in the biological, medical, psychological, and social science areas through the research fellowship and career investigator programs. These programs should be continued and expanded. However, there is a need not only to provide research training for the promising student on an individual basis, but to assist training centers in improving, expanding, and developing new research training programs. The major new emphasis in the immediate future, therefore, will be in the specific training of research personnel. There is direct evidence of readiness on the part of training centers to expand training of research personnel which should result in a marked increase in the number of graduates capable of, and motivated toward, scientific investigation of mental health and mental illness. In addition, it is anticipated that a number of new, strong research training centers will develop as a result of this effort.

It is generally agreed that research training should begin at the earliest possible date in the individual's professional education. The provision for mental health orientation and for introduction to research methods can best be accomplished, in the case of physicians, during undergraduate medical school. The training grant program has made a beginning toward this objective. Additional funds, if made available, would be used primarily to expand the mental health content in the medical curriculum and to develop basic science departments of human behavior in the medical school. It is expected that the necessary models attracting students to research careers will develop in the context of such departments.

A number of medical schools have already started or are currently contemplating the establishment of such research-oriented departments. In the other disciplines relevant to mental health, consideration is also being given to the best methods of stimulating universities and other training centers to improve and expand their programs of research training for students early in their professional or preprofessional training and to provide these students with an introduction to mental health problems.

Another specific line of development recommended by the National Advisory Mental Health Council, on which a small beginning has been made, is the training of personnel concerned primarily with preventive mental health work in the community. These programs, as well as certain others designed to increase the community resources for dealing with mental health problems, will be expanded as funds become available during the coming 5 years.

In addition to the foregoing general research preparation, specific problem areas also will be approached on a programmatic basis. In such pressing research problem areas as psychopharmacology, neurophysiology, child development, and social psychology, meritorious programs will receive expanded support. There also is a definite shortage of clinical and research workers in the fields of geriatrics, alcoholism, juvenile delinquency, and mental retardation. Continued and expanded support of training for professional personnel in these and other problem areas also will be given.

The continuing demand for well-trained personnel suggests an urgent need to maintain existing graduate training at the present level of support and to provide for increases commensurate with the availability of additional teaching and supervisory personnel. The vastly enriching impact of mental health education at the undergraduate level in medical and nursing education should be increased. The pilot project, career investigator, career teacher, research fellowship, and senior stipend programs will expand as training centers extend the scope of their activities. Moreover, the personnel needs in special problem areas are increasing and training efforts to meet these special needs in aging, alcoholism, drug addiction, mental retardation, and juvenile delinquency should be expanded.

It is particularly important that future developments in the training grants program be planned well in advance. Universities and other training centers cannot meet the urgent needs without sufficient time to plan for changes in curriculum and in teaching personnel. A minimum of 1 year's lead time is necessary to put a new training program effectively into operation. There should be careful planning over the next several years for increased research training, education for preventive mental health work, and programs dealing with special mental health problems.

Background Statement on the Psychopharmacology Service Center

I. NEW DRUGS

The past year has seen a striking expansion in the number of drugs available to physicians for the treatment of psychiatric conditions. In the spring of 1956 only three had come into any considerable prominence. The first of these was chlorpromazine (Thorazine), a phenothiazine derivative, originally developed by the French pharmaceutical firm, Rhone-Poulenc, and first used in psychiatry on this continent by Dr. Heinz E. Lehmann of Montreal, Canada. The second drug was reserpine (Serpasil, Reserpoid, etc.), an alkaloid found in the root of the Rauwolfia serpentina plant (the Indian snake root), which native practitioners in India have used for centuries to treat psychiatric conditions. Dr. Nathan S. Kline of Rockland State Hospital, Orangeburg, N. Y., was the first to test its efficacy in psychiatric patients in this country. The third compound was meprobamate (Miltown, Equanil), which has a simpler chemical structure than the other two. Meprobamate was developed by Dr. Frank M. Berger of Wallace Laboratories in his search for a more potent muscle relaxant and a more effective treatment for tension states than mephenesin, a compound which had been in existence for several years but which possessed these properties only to a very limited extent.

Since that time the number of compounds released by the Food and Drug Administration for prescription use as tranquilizers has increased severalfold. The following review of the development of the past year in this rapidly expanding field has been prepared by the Psychopharmacology Service Center on the basis of its review of the literature and discussions with clinical investigators and representatives of pharmaceutical firms. It is designed to provide a brief overview of the state of the field. The report should not be considered as providing any final or definitive appraisal of any of the compounds mentioned.

A. Chlorpromazinelike drugs

A number of pharmaceutical firms have marketed compounds related to chlorpromazine which may be referred to in a general way as phenothiazine deriva-

tives. One time-honored scientific method of finding a better drug for a given purpose is to explore a wide variety of compounds similar in structure to a drug known to be somewhat effective. In this way an attempt is made to find a related compound which will either be more effective, have fewer undesirable characteristics, or both. In the case of chlorpromazine the major undesirable effects have been transient jaundice, which may occur in 1 percent of patients treated; agranulocytosis (decrease in the infection-fighting white blood cells) which is much rarer though more serious, occurring only in perhaps one of every two to ten thousand patients treated; and parkinsonian symptoms which include muscular rigidity and tremor. This last effect can occur in more than half of all patients treated if very large doses are used. It is observed in 5 to 10 percent of patients treated more conservatively, and ceases if medication is reduced or stopped. If the clinician considers it necessary to maintain a patient on a dosage of chlorpromazine which produces parkinsonian symptoms, he will often administer an antiparkinsonian drug to control this side effect. Its occurrence seems to be the result of a direct pharmacological effect on the central nervous system, whereas the jaundice and agranulocytosis are, in contrast, comparatively unusual reactions occurring in persons showing some special sensitivity to the drug.

The newer phenothiazine derivatives which include promazine (Sparine), mepazine (Pacatal), prochlorperazine (Compazine), perphenazine (Trilafon), thiopropazate (Dartal), triflupromazine (Vesprin), and promethazine (Phenergan) have all been introduced by the firms manufacturing them as having clinical efficacy equal to or greater than chlorpromazine as well as having fewer untoward effects. In general, the jaundice developed on chlorpromazine therapy does not occur in patients under medication with these newer phenothiazines. Cases of agranulocytosis have been reported for two of these drugs. Parkinsonian and other neurological symptoms, similar to those resulting from chlorpromazine therapy, have been reported for most of these agents. Sufficient information is not yet available to judge reliably the relative safety of all these drugs. The incidence of serious blood dyscrasias and other side effects suggests that these drugs be used clinically with considerable caution and close medical supervision. The Center's staff is currently exploring methods for setting up a feasible and informative system for the reporting of toxic reactions to psychiatric drugs in a continuing manner. It is also looking into the possibilities of using existing hospital records to determine the exact incidences with which serious toxic reactions to these drugs have been occurring.

A study at the Vermont State Hospital investigating in a careful and detailed manner the neurological, psychological, and manual performance changes associated with these parkinsonian side effects has begun under an NIMH grant. This work will, hopefully, throw new light on the relationship between these side effects and the therapeutic action of these drugs. Research in this area has been held up, to date, by the lack of adequate methods for determining the extent and degree of parkinsonian symptoms, and this study should provide measures useful to other workers in this field.

All of these phenothiazine derivatives seem to share the tranquilizing effect on disturbed psychotic patients possessed by chlorpromazine. One of these compounds, prochlorperazine (Compazine), has been claimed to be useful in the treatment of neurotic patients. It is difficult at this time to tell whether any of these compounds possess any dramatic superiority over the others. It may well prove to be that beyond certain differences in dosage level and the frequency of side effects, they are all of the same general order of usefulness in the more serious psychiatric disorders. However, preliminary reports suggest that some of these drugs may not only produce less sedation than does chlorpromazine, but may even have a stimulant action in some patients. The Psychopharmacology Service Center has been in contact with several investigators during the planning of clinical studies to compare in a well-controlled manner the clinical attributes of these drugs, and three such studies are now underway. Even newer phenothiazine derivatives are under careful preliminary clinical study under a grant from the NIMH, being carried out at the New York State Psyciatric Institute.

B. Reserpinelike drugs

In the past year, two other compounds related to reserpine have been separated from the crude rauwolfia root extracts and have been released for general medical use, deserpidine (Harmonyl) and rescinnamine (Moderil). As in the case of phenothiazines, both of these are claimed, on the basis of early clinical

studies, to be somewhat more potent than reserpine, with fewer side effects. The whole problem of the relative merits of this group of drugs as compared to the phenothiazines in the treatment of disturbed patients is still open. It seems clear that the phenothiazines in general act more rapidly in most cases. A controlled study investigating the effectiveness of reserpine and chlorpromazine in acutely ill, hospitalized psychiatric patients is now being carried out under an NIMH grant at the University of North Carolina.

C. Other tranquilizing drugs

Several drugs are in clinical use in the treatment of nonhospitalized neurotic patients. These agents have been classified by the American Medical Association's council on drugs as sedative central music relaxants. These compounds are generally not used in disturbed hospitalized patients. They are of heterogeneous chemical structure but, in general, are simpler molecules than the phenothiazine derivatives. Meprobamate was one of the first compounds of this type to be used clinically. In this category of minor tranquilizers might be placed hydroxyzine (Atarax), azacyclonol (Frenquel), benactyzine (Suavitil), phenyltoloxamine (PRN), and phenaglycodol (Ultran). The place for these drugs in the therapeutic regimen of the mentally ill has yet to be established. They appear to be most effective in outpatient anxiety states and related neurotic conditions. Some of these drugs may prove to be very useful as therapeutic aids in the long-term treatment of patients released from mental hospitals, but clinical studies have not yet established this point.

The center's advisers and its staff have been concerned by the paucity of studies, controlled or otherwise, of drug effectiveness in neurotic or other nonhospitalized outpatients. Adequate methods for assessing change in patients of this sort are not presently available. The center, with the help of a subcommittee of its advisory committee, is developing such a tool as a needed first step to the stimulation of meaningful clinical studies in this area. One clinical study of drug effectiveness in outpatients using a simple rating device is now being developed under grant support.

D. Antidepressive drugs

During the past year interest in drugs potentially useful in the treatment of depressed patients and overly tranquil, schizophrenic patients has been mounting. Both groups of patients have been only slightly helped by tranquilizing drugs, and the need for antidepressive or stimulant drugs (sometimes referred to as psychic energizers in the lay press) has become increasingly evident. Two newer compounds, methphenidylacetate (Ritalin) and pipradrol (Meratran), have been developed for use in such conditions, but these drugs have proved to have limited usefulness. Earlier stimulants such as amphetamine (Benzedrine) and dextroamphetamine (Dexedrine) have been considered to be only occasionally useful in treating depression since their stimulant properties and side effects often produced discomfort and increased agitation. Iproniazid (Marsilid) in preliminary work by Dr. Nathan S. Kline at Rockland State Hospital has shown promise in the treatment of both depressed and apathetic patients. This compound was originally studied as a chemotherapeutic agent active in tuberculosis and has also had considerable use in basic neurophysiological and biochemical research because of its potent inhibitory effect on the enzyme, amine oxidase, which is believed to destroy the serotonin produced in the brain. Further basic research may lead us to better understanding of the action of iproniazid as a stimulant drug and may provide a better understanding of brain function in general.

Early reports from a number of experienced clinicians would indicate that iproniazid sometimes, but not invariably, produces striking improvement in depressed patients. Its effects in chronic schizophrenics appear less striking and it may sometimes produce disturbed psychotic behavior. The drug may be somewhat more likely to produce undesirable effects at higher dosage levels than do the tranquilizers and there have been rare fatalities reported due to liver damage.

The Psychopharmacology Service Center staff, in its contacts with clinical investigators throughout the country, has heard early enthusiastic preliminary reports on other new stimulant drugs not yet at a stage of evaluation to warrant formal processing by the Food and Drug Administration. In September of this year, the center brought together a group of clinical investigators to discuss ways in which such drugs might best be studied. This group believed that the term "energizing" really encompassed two different types of drug action. One

of these would be a mood elevating or antidepressant action in depressed patients. The other would be a kind of stimulant effect on regressed schizophrenic patients. These actions would have to be studied separately. One application for the support of a study of drug effectiveness in depression has been received as a result of this meeting, and a second is in the planning stage.

E. Followup of drug-treated patients

There has been considerable interest in the relationship of tranquilizing drug therapy, release of patients from psychiatric hospitals and the ability of such patients to adjust in the community with or without continuing long-term drug therapy. Three studies in this important area are now going on under grant support. One is investigating the contribution of drug therapy itself to the adjustment of the newly released patient to the community. A second is determining whether chronically ill patients need to be continued on maintenance drug therapy indefinitely. The third is analyzing the records of a State hospital system to determine the effects of drug therapy on both the release and readmission rates of various types of patients, contrasting these data with release-readmission rates in similar patient groups before the advent of drug therapy. The center's staff has been concerned over the possibility that long-term drug administration may bring with it toxic effects. Extensive communication with a number of experienced clinicians has not revealed any present cause for concern over long-continued tranquilizer administration.

II. RESEARCH METHODS IN PSYCHIATRIC DRUG EVALUATION

Certain problems intimately connected with the evaluation of clinical drug effectiveness in psychiatric patients are being tackled in a number of ways by the center's staff and its cooperating investigators.

A. The measurement of change in treated patients

There is a most serious need in this field for the development of better methods for measuring behavioral change and improvement in psychiatric patients. Existing rating scales are adequate for some purposes, but none were originally designed to measure the effects of drug therapy, and it is evident that all of them could be greatly improved. A recent grant to the Westchester division of the New York Hospital has been productive of a greatly improved scale for the rating of the behavior of hospitalized patients by the nursing staff. These investigators have now received a second grant for the support of a drug study which will test the usefulness of this new device in evaluating the effectiveness of both a tranquilizing and an energizing drug. It will be necessary to develop similar new or improved scales to enable better studies to be carried out on neurotic outpatients, released expatients, and depressed patients. It is believed that a combination of the working group approach and intensive interaction with individual investigators will facilitate the development and widespread use of such badly needed measuring devices.

A group of investigators at the University of Rochester has been studying for several years the effects of various drugs on the behavior, psychological functioning and emotional attitudes of normal subjects. These investigators and their staff, working under NIMH grant support, have found that the subject's own reporting of his emotions and feelings, as recorded by his checking on a list of adjectives those which describe the way he feels, is a very sensitive indicator of drug response. Trained observers can also reliably judge an individual's response to a drug, recording their judgment on a similar adjective check list. Although this technique has not been given any real trial in the study of drug effects in psychiatric patients, it has seemed to the center's staff that the method might be usefully applied to such studies. A modification of this approach has been used in developing the rating device for use in neurotic outpatients mentioned under (C) above.

B. The influence of the environment on the results of drug therapy

An important factor in any clinical drug study is the effect of the physical and social environment on the response to drugs. A grant-supported study to determine the relative effectiveness of the same drug therapy in two different hospital settings on a homogeneous group of chronic schizophrenic patients is now underway at the Massachusetts Mental Health Center in Boston. All the patients are from two State hospitals. Half are being treated in a State hospital with traditional custodial care while the other half have been transferred to the Massachusetts Mental Health Center where they receive the same

drug therapy in a much more intensively therapeutic environment. At the end of the first 6 months of the study there had been 1 discharge in the group receiving custodial care, and marked improvement had been noted in 2 other cases. In the group receiving intensive therapy, there had been 7 discharges, and 4 others had shown marked improvement. In other words, when the patients received the drugs and custodial care only, 3 were considerably improved, but when intensive psychotherapy accompanied the drugs, 11 patients were considerably improved.

C. New ways in handling data

Two other new and mutually complementary technical approaches to clinical drug study are under development. The first is a study of the possible applicability of a statistical technique known as "sequential analysis" to clinical psychopharmacological research. This technique, already utilized effectively in such diverse areas as agriculture, industry, and currently being applied to cancer chemotherapy, involves the application of statistical tests of significance to a gradually accumulating body of data as results in individual cases become apparent. In this way one can stop any particular study as soon as the data have achieved a given predetermined degree of statistical certainty and one can avoid the needless collection of large masses of additional, unnecessary data, costly in terms of dollars and man-hours, which might be required if a study were only analyzed at a single point after a large amount of data had been collected. This approach is being applied at the University of Oklahoma under grant support.

The second technical method, complementary to the first, but useful in other situations as well, is the coding of clinical drug data for IBM machine handling. This approach, not previously used in the clinical psychiatric drug evaluation area, has two telling points in its favor. First, it permits the rapid analysis of the large bodies of data resulting from the detailed study of moderate numbers of patients before, during, and after drug therapy and may reduce such an analysis from several hundred man-hours to, perhaps, 20 hours of machine time. The second major point in its favor is the requirement it places on the investigator. In order to utilize this time and laborsaving method, he must plan carefully in advance the types of data he wishes to collect and the ways in which he wishes to analyze them. This requirement, that research be well planned and thoroughly thought out in advance, might seem self-evident and superfluous, but one has only to examine some of the research already published in this and related fields to perceive the advantages of insisting in advance on such a demanding approach. The center is fortunate in having on its staff a research psychologist with considerable experience in this important area, and it is hoped that by cooperative work with appropriate investigators, the advantages of this approach can be properly demonstrated.

D. Preclinical screening of drugs

It should be added that the above clinical techniques are most applicable at that stage in research when specific hypotheses as to the nature and range of a drug's action can be formulated. At the preclinical phase of a drug's development certain animal neurophysiological, biochemical, and behavorial tests appear most useful both in anticipating potential effectiveness and in avoiding potential toxicity in humans. Animal studies pertinent to this general problem under National Institute of Mental Health support have increased during the past year from 15 to 24. This considerable volume of work in progress is only a portion of the total national research effort since a number of the larger pharmaceutical firms have added animal psychologists and experimental behavior laboratories to their research departments. At the psychopharmacological level, as at the general pharmacological level, results obtained in animals do not always accurately predict a drug's action in man.

Unfortunately most of the ongoing and published research work on drug effects at the animal level involves the study of only 1, or at most 4 or 5 drugs, in any one kind of experiment. It is not possible at present to find comparative evidence even on the action of each of the 25 tranquilizers presently available for prescription use on any of the several biochemical, electrophysiological, or animal behavioral tests currently being used for the screening of new drugs.

Before our present screening methods can be improved, there must be available comparable evidence on all existing psychiatric drugs both on the available screening methods and on their action in psychiatric patients. When such information is available, present screening procedures can be assessed and

improved. The Psychopharmacology Service Center staff in cooperation with its advisory committee is actively exploring ways in which a coordinated study of the kind outlined above can be developed.

E. Cooperative clinical trials

At the time the Psychopharmacology Service Center was first set up, the almost unanimous opinion of the Center's advisers and of most psychiatric researchers was that not enough was known about the best methods for studying drug effectiveness in psychiatric patients to warrant the development of an expensive multihospital cooperative study of drug effectiveness. During the past year and a half the Center's extensive experience with the designing of controlled clinical trials and with the use of rating scales and other measurement devices has led to a more sanguine view of the possibilities of carrying out cooperative studies of drug effectiveness in hospitalized psychotic patients, a group for which relatively good rating procedures are now available and in which enough controlled studies have been carried out to enable a model research design to be intelligently prepared. This situation does not hold true for the depressed patient or the neurotic outpatient or for drug studies in other special areas, such as alcoholism, child psychiatry, or psychiatric illness of the senium.

The Center's Advisory Committee has recently recommended that the staff explore further the possibilities of having a productive cooperative interhospital drug study effectively organized. The Center's staff has begun work in this area, and it seems possible that such a study could be instituted, at least on a small scale, during the coming year.

As a general principle in the area of research stimulation, as in all research, it is evident that experience in the design of small individual studies with concurrent stimulation of improvements in methodology, is a necessary precursor of the development of larger coordinated or cooperative studies.

III. RESEARCH ON MECHANISMS OF DRUG ACTION

Very little is known about the mechanisms of action of psychiatric drugs. They do affect the central nervous system and behavior, but how they exert this effect has not been discovered. As a mechanism in the adjustment of the organism to its environment, the central nervous system is available to pharmacologic action. In this way drugs can influence consciousness, thinking, mood, depression, excitability, perception of pain, and motor performance. In disease states in the presence of aberrant function, it is conceivable that drugs may tend to restore central nervous system function to normal.

Avenues of approach to an understanding of the mechanisms of drug action involve behavioral studies as well as biological studies at the cellular and subcellular level. The following general types of investigations are currently supported:

(*a*) Enzyme inhibition of chemical neurotransmitter substance.

(*b*) Biochemical-metabolic changes in the brain.

(*c*) Brain electroencephalographic and other electrochemical changes within the central nervous system.

(*d*) Psychological functioning.

Continued and expanded provision for support of work in this area is necessary. Basic research on mechanisms of drug actions at both the psychological and biological levels is gathering momentum and numerous investigators are being attracted to research in this field.

Basic information regarding the influence of drugs upon behavior will obviously accrue from many fields. The refinement of techniques in electrophysiology, the developments in cytochemistry, and the increasing number of synthetic chemicals that influence mental function, plus the emergence of improved methods for the study of drug effects on animal behavior and human psychological processes, all will contribute to a rapid expansion of basic knowledge.

IV. SYNTHESIS OF NEW COMPOUNDS

Despite the large number of already available drugs, there is still need for improvement.

(*a*) To develop drugs that are optimally effective with a minimum of undesirable effects.

(*b*) To synthesize new drugs with specific actions against particular symptoms or diagnostic categories.

The American drug industry is actively engaged in synthesizing new drugs and in testing them, and older compounds, for clinical effectiveness. In addition, several grant-supported projects were initiated during the past year. These projects are exploring new fields and are developing new techniques. Four of them are synthesizing and testing psychotomimetic drugs, which are of considerable importance to the understanding of brain function and the nature of the schizophrenic process. On the basis of the combined efforts of the drug industry and independent investigators, it can be stated that the program of drug synthesis is advancing with great speed and with high standards of excellence.

V. INFORMATIONAL AND ADVISORY SERVICES

The development of the center's Technical Information Unit provides, among other tools, a competently coded and abstracted comprehensive reference file encompassing the major part of the available published literature in the psychiatric and psychological aspects of psychopharmacology. Its organization has been a major accomplishment of the last 6 months. The staff work invested to date should produce increasing dividends as knowledge of the unit's existence spreads and the gradual expansion in the scope and frequency of its use continues.

The National Library of Medicine has been working with the staff of the Psychopharmacology Service Center on the preparation of a definitive bibliography which will encompass all the published literature since 1952 on the psychiatric and psychological actions of these drugs. The literature has been thoroughly searched and the material is in its final prepublication phase. The Center's Technical Information Unit is also preparing several smaller annotated bibliographies on special topics which will be made available to interested scientists and clinicians.

A number of investigators have already used the Center's reference files to assist them in the preparation of review articles. In addition, the Center's staff has provided informal consultant services to the Food and Drug Administration on specific technical problems, and to clinical investigators and representatives of pharmaceutical firms on problems of clinical research design. The extent to which the Center's reference file and the Center's professional staff are being used for such technical advisory services is continually increasing.

VI. THE PSYCHOPHARMACOLOGY SERVICE CENTER'S FIRST YEAR AND A HALF

During its first year and a half of operation the Center has experienced the usual trials and tribulations which face any new unit. Space and recruitment have both posed major problems. After three changes in location, the most recent of which involved moving to Silver Spring, the Center is finally to be returned to the NIH ground in the next month or two to what will, hopefully, be its permanent home. The Center has been fortunate in obtaining the services of a well-qualified pharmacologist and 3 well-qualified clinical psychologists, after a good many months of unsuccessful searching, and now possesses a professional staff of 6, including a psychiatrist, a pharmacologist, 3 clinical psychologists, and a psychologist with special experience in publication and technical information activities. Along with the increase in staff size the amount of staff time required in working with potential investigators, in developing needed studies, and in helping c urrent grantees who need advise or assistance in research design or data analysis, together with the reviewing of grant applications, has expanded to the point that even this larger staff is working under increasing pressure.

The first year and a half has also been a period in which the Center's special needs have been carefully studied and appropriate administrative procedures have been developed which are congruent both with the Center's activities and with the existing policies and procedures of the NIMH. A Psychopharmacology Advisory Committee under the chairmanship of Dr. R. W. Gerard, professor of neurophysiology, Mental Health Research Institute, University of Michigan, has been established and is functioning with increasing effectiveness. This committee has worked with the Center's staff in exploring the problems of the field and planning appropriate ways in which these may be tackled.

All in all, though the major problems are by no means solved, the groundwork has been laid for a broad and effective program of research stimulation and research accomplishment to be vigorously pursued in the coming year.

Attached to this report is appendix A, listing the number of grants awarded and the amount of support provided in the general areas described above, during fiscal year 1958.

Appendix A

Currently Active Projects in Psychopharmacology

The total number of projects and the total amounts of support being provided from fiscal year 1958 funds are given, and similar figures are provided for the five major areas of support within the program:

	Number	Amount
I. Clinical evaluation of drugs	23	$752,616
II. Psychological mechanisms of drug action	28	496,079
III. Biological mechanisms of drug action	18	203,749
IV. Biopsychological mechanisms of drug action	16	306,561
V. Synthesis of new psychopharmacological agents	7	72,545
Total	92	1,831,550

BACKGROUND STATEMENT ON MENTAL HEALTH PROJECT GRANTS PROGRAM

Title V of the Health Amendments Act of 1956 provided for project grants to be made for the purpose of development of the improvement of methods of care, treatment, and rehabilitation of the mentally ill. This program has been met with enthusiastic response from both official and nonofficial mental health agencies. First funds were made available in the fiscal year 1958 when an allocation of $2 million was made for this program.

A committee was appointed for the purpose of reviewing the applications and making recommendations to the National Advisory Mental Health Council. This committee consists of representatives from the field of psychiatry, psychology, social work, nursing, sociology. In addition to the basic disciplines, some of the members were chosen for their knowledge of mental hospital administration. Up to the present time, 151 project applications have been received in the amount of $6,202,139; 62 of these applications have been approved and paid in the amount of $1,904,749. Our obligation for continuing grants in fiscal year 1959 will be $1,768,896, and in 1960 the amount will be $1,392,272.

The Review Committee is reviewing, in April 1958, 50 additional applications, totaling $1,987,257, for projects with starting dates during the first quarter of fiscal year 1959. This would indicate that the momentum which the program developed during its first year will at least be sustained, if not surpassed, in fiscal 1959. The Review Committee at its January meeting discussed the program and its future development. It is their opinion that this type of grants program has been long anticipated and much needed. In their travels about the country they have found great enthusiasm for the continuation and further extension of it. They believe that it is getting to be one of the important factors in stimulating the development of new and improved methods in the care, treatment, and rehabilitation of the mentally ill, particularly in public mental hospitals and related services. It was their opinion that if allowed to continue to develop at its present rate there will soon be at hand meritorious projects requesting support in the amount of $3½ million to $4 million.

BACKGROUND STATEMENT ON MENTAL HEALTH STUDY ACT

The Mental Health Study Act, passed in July 1955 as a joint resolution by unanimous vote, authorized three annual grants totaling $1,250,000 to a nongovernmental multidisciplinary group competent to undertake a study of our resources, methods, and practices for diagnosing, treating, caring for, and rehabilitating the mentally ill. On recommendation of the National Advisory Mental Health Council the grant was made to the Joint Commission on Mental Illness and Health, an incorporated group of 36 organizations and agencies with a working interest in some aspect of mental illness. This organization has now completed the second year of its projected 3-year study. The summary of the present status of the study is contained in the second annual report of the commission. According to present planning, the final report will be ready by

July 1, 1959. The director of the project is Jack R. Ewalt, M. D.; the headquarters are at 808 Memorial Drive, Cambridge, Mass. The first year grant of $250,000 was paid in 1956; $500,000 was paid in 1957; and the third and final grant of $500,000 has now been paid.

The Joint Commission on Mental Illness and Health visualizes itself as having two functions: (1) to make an objective study of mental illness and health, and (2) to stimulate action at national, State, and community levels through its report to Federal and State Governments and through its participating organizations. Thus, in this final aspect the commission is concerned with theory, its testing, and its validation. In the area of moral or social responsibility, however, it is concerned with practice—what works for the improvement of mental health, what produces better results in treating mental illness, where we have failed, and what should be done next. The commission hopes that its findings and recommendations will result in the development of a rationally planned, cooperative nationwide mental-health program.

The study of mental illness and mental health has been divided into 10 projects. The individual projects were formulated with the help of advisory committees made up of consultants competent to the field to be studied. Generous use was also made by the commission of individual consultants chosen not only for their specialized knowledge but also for their wisdom and judgment in the field of human behavior. Each of the projects has its own staff known as a task force. Each task force will make a report to the commission and it will be the responsibility of the staff of the commission to formulate its final report and recommendations on the basis of these individual reports. All of the projects are well underway. Two have been completed and will be written up early in 1958. They are: Current Concepts of Positive Mental Health; and Economics of Mental Illness. It is anticipated that two other reports will be completed by the fall of 1958. These are: Mental Health Manpower, and the Nationwide Sampling Survey of Mental Health. It is anticipated that the remaining projects will be completed in the winter, spring, and early summer in 1959.

Reports of the individual projects may be published separately, but the opinions expressed in them may not necessarily be the official opinions of the commission which will appear in the final composite report. Following is a list of the individual projects making up the total study:

1. Patterns of patient care:
   (*a*) The outpatient.
   (*b*) The inpatient.
   (*c*) The expatient.
2. Nonpsychiatric community resources in mental health.
3. Role of schools in mental health.
4. Role of religion in mental health.
5. National sampling survey of mental health.
6. Research resources in mental health.
7. Mental health manpower.
8. Epidemiology and etiology of mental illness.
9. Economics of mental health.
10. Current concepts of positive mental health.

Each study project attempts at least 2 and in some instances 3 kinds of investigation in varying degree:

1. A review, analysis, and evaluation of:
   (*a*) The state of knowledge or belief;
   (*b*) The operational activities and results in a given field.
2. Spot checks or direct personal communication to obtain new information and fresh slants.
3. Original research in the shape of field surveys at a national or community level.

In carrying out the study, emphasis has been placed on two attitudes. One is to make a scholarly approach, i. e., to be intellectually honest, thorough and critical, recognizing one's own as well as the other fellow's bias. The second is to be heterodox with a sharp eye for new or different methods of problem solution.

The joint commission anticipated that they would be able to raise funds from private foundations and other sources to supplement the Federal grant. To date these supplemental funds have amounted to $170,500. It is anticipated that they will need to raise about $100,000 more in order to complete the study and publish the report.

BACKGROUND STATEMENT ON MENTAL HEALTH TRAINING PROGRAM

In its report on the appropriation for mental health activities for fiscal year 1958, the Senate committee said:

"The committee is sufficiently concerned with training in this area that it is requesting the National Institutes of Health to prepare a definitive document on training in the field of mental health. Such a report should include the basic philosophy of the Institutes as this has emerged over the past 10 years; a survey of what has been accomplished over this period of time, separating where possible, service from research; a detailed description of the program in fiscal 1957 and 1958; and a careful appraisal of the training needs as best visualized during the coming 5-year period."

The last decade has seen many significant developments in the pattern of activities directed toward the control of mental illness and the promotion of mental health. The great concern of 10 years ago about the provision of treatment for the mentally ill is undiminished. Today, however, approaches to treatment are more numerous, varied, and differentiated than they were. Not only are there today more members of the clinical profession long recognized as the basic treatment resource for dealing with mental illness, but additional professional groups have found a role in this area of work.

Today, also, the concern about the treatment is matched by a growing and realistic interest in the prevention of illness and the promotion of optimal mental health. This concern is not newborn, but new ideas, new insights, and new methods of approach have developed. They have grown out of much thought upon the part of many, research of varied kinds, and the pragmatic efforts of mental health programs to grapple with the tasks of preventing mental illness and promoting mental health. These developments have yet a long way to go, but they have made clear the need for kinds of personnel other than those with clinical competence to treat the presently ill. The real emerging need of today is for more high level research personnel among those whose primary skills are in the treatment area as well as increased numbers of research workers in the whole array of biological and behavioral sciences, workers who have a sensitive understanding of the problems of mental illness and the nature of mental health.

An adequate approach to the training of mental health personnel must deal with all of these facets of this area of activity. This report summarizes the way training efforts have reflected these changes in the mental health picture during recent decades as well as the ways in which initiative on the training front has precipitated or at least accelerated some of the changes on the wider scene.

The mental health training activities of the National Institute of Mental Health have developed in accordance with the emerging perceptions of the nature of the mental health training problem. In turn, the work of the Institute has had an impact upon the developments in terms of its support of training, its stimulation of self-appraisal by the professions involved, and its systematic staff work on many of the problems. The section of this report entitled "The Nature and Pattern of Training Activities" describes the ways in which the support and stimulation has been effected during the last 10 years.

The training program during the first decade has developed a variety of ways to meet the growing demands. In 1948 there were 4 identifiable programs; in 1958 there are 16. The appropriation for mental health training grants in 1948 was $1,059,700. In 1958 it is $13,300,000. To this may be added $800,000 for research fellowships and career investigators, making a total of $14,100,000 available in 1958. The early emphasis was properly on the increased training of psychiatrists, clinical psychologists, psychiatric social workers, and mental health nurses. In addition, early steps were taken to increase the psychiatric sophistication of all new physicians by supporting the development of greater psychiatric content in medical school curricula. A similar step was later taken in the undergraduate nurse training area. While the bulk of financial assistance in the early days of the program went to clinically oriented programs, the support of training for the research worker was present from the first in terms of fellowships.

Recent developments have emphasized support for a variety of kinds of research workers whose value and usefulness is becoming increasingly appreciated. The behavioral scientists, biological scientists, epidemiologists, and others have shown their ability not only to contribute research findings of great value, but many of them have real roles to play in the community approach to mental illness

directed toward the prevention of illness and the promotion of mental health. The realization that these scientists can contribute not only on the research front but also in terms of preventive services is one of the truly important developments of the decade. The recognition and support of training needs in these areas is vital to the developing mental health programs of the States and communities.

During the intermediate years of the program, training support was initiated for additional groups who appear to have value for the prevention of illness and the promotion of mental health. Some of the activities were pilot projects of small size and limited duration aimed at exploring the mental health training needs of lawyers, ministers, and similar professionals who help people deal with life problems. A continuing effort was initiated to introduce mental health concepts into the training of public health workers.

Training support has characteristically involved funds for the training activities of the departments of instruction and training institutions as well as support for the trainees. Until recent years institutions received no systematic training support in the research area, although individuals receiving research fellowships were assisted in their pursuits of training. The career investigator program, career teacher program, and the recent inclusion of training support for the biological and behavioral sciences, epidemiology, and biometry have created a condition where the nature of support in the research and clinical areas is relatively comparable.

In the period 1949–56, a total of $29,256,251 has been expended in support of training in the field of mental health. During this period a total of 3,939 persons received training under the public health traineeship program in mental health fields. In terms of the disciplines involved, the largest proportion of the funds (47.6 percent) has gone into psychiatry including both the graduate and undergraduate levels of training. Clinical psychology, psychiatric social work, and psychiatric nursing have received nearly equal shares of an additional 48.1 percent of the total funds. The remaining 4.3 percent has gone into the field of public health (2.4 percent) special projects for short term conferences, institutes, and workshops (1.8 percent) and 0.2 percent for pilot programs in related professional areas. About 70 percent of the training grant funds have been awarded for the support of institutions providing the training; trainees receiving the remaining 30 percent of the funds in the form of traineeship awards. These figures do not include funds in the amount of $3,230,000 awarded by slightly different mechanisms to 444 research fellows and career investigators during the same period.

The institutions have used the funds awarded them for a variety of purposes, but a highly preponderant proportion of all training grant funds awarded to institutions has gone into the provision of teaching personnel. As a matter of fact, 97 percent of all training grant funds during the decade have been used to pay directly for teaching or to make awards to trainees.

Also of interest is the nature of occupational activity characteristic of those who have received support as trainees or research fellows. In each case, information is available for a reasonably large percentage of the total persons who have received such individual assistance. The information presented in the report is fairly complete and detailed. Only a few findings need be mentioned here to be suggestive of the results obtained.

In the case of traineeship recipients, 70 percent are reported as predominantly working in the fields of public service, teaching, or research. Only 10 percent are primarily in private practice. Thirteen percent are still in training. This pattern of activity is gratifying since it indicates that traineeship recipients are contributing effort in areas of great importance and need. Similarly, 86 percent of research fellows have continued in research, most of whom (54.7 percent of the total) are spending half of their time or more in research work. Other congruent data are presented to show that research fellows may be reliably expected to show a persevering and successful interest in research on a career basis.

The above information indicates that mental health training in the country has improved both in quantity and quality during the last decade. Some of this improvement is a result, direct or indirect, of the Institute's training program. The last 10 years have in fact been pioneer ones. The future prospect is extremely hopeful because of the increased interest of many capable workers to devote research effort in the mental health field, because some of the methods of the control of illness and the promotion of health are now becoming understood

and because more and more kinds of professionals are finding a place in which to contribute to mental health.

From the foregoing there are three conclusions with respect to future needs. First the need for clinically competent personnel is far from being met. Efforts must continue to increase and improve the supply of personnel of this kind. Second, augmented effort must be made to increase the number of research personnel trained to make contributions to the problems of treatment and prevention of illness and to the promotion of mental health. The methods and ways of training such personnel are just now becoming clear and advantage must be taken of the increased attractiveness of mental health careers in the research area. Finally, there is a need for increased numbers of behavioral scientists who can contribute to community mental health programs by methods going beyond the clinical approach. It is to be hoped that during the next 5 years the advances in the training of clinical personnel can be continued but matched by corresponding advances in producing mental health research personnel and behavioral scientists to help the clinicians staff community mental health programs aimed at the prevention of illness and promotion of mental health.

Recent Advances in Mental Health Research, January-March 1958[1]

Items of interest on program developments and research studies conducted and supported by the National Institute of Mental Health

Rehospitalization and performance level among former mental patients

While the mental hospitals of the Nation appear to be relatively successful in meeting the modest goal of having large numbers of patients return to and stay in the community, the released patients range in performance from the completely "normal" and functioning individual to the one who can function only in a limited way. NIMH grantees have studied the factors that may be responsible for the relative success or lack of success in the rehabilitation of the released mental patient.

Drs. Ozzie G. Simmons and Howard E. Freeman, Harvard University, and James A. Davis, Yale University, studied a group of 59 patients who were considered to have been successful in rehabilitation after release from a mental hospital. Success was defined as having remained out of the hospital continuously for over 2 years.

Patients rated "high" by the investigators have the following characteristics: They work full time or are solely responsible for the care of the home; they participate in informal or formal social activities about as often as do other family members; they were able to relate well in the interview situation; they were reported by their relatives to be "recovered"—active in the life of the family and without such symptoms as long periods of depression or hallucination. "Low" patients failed to meet some or all of these requirements.

The patients' age, sex, previous admissions, and diagnosis showed no significant relationship with level of performance. Those patients who, before hospitalization, had more mature family relationships and participated more in social activities did appear in higher than expected numbers in the "high" group. In general, those patients who returned to parental families showed a very significantly lower level of performance than did those who returned as husband or wife to conjugal families.

In addition, the "high" patients tended to be those who believed, and whose families believed, that (*a*) mental illness has environmental causes, (*b*) the mental hospital has a positive and constructive function, and (*c*) mental illness does not basically change a person. "Low" patients and their families tended to have unfavorable attitudes toward the hospital, believed that mental illness has hereditary causes, and that it does basically change a person.

Investigators hope that a larger study now underway will provide more definitive answers about the role the family structure plays in helping or hindering the ex-patient to improve.

Family milieu therapy as a substitute for hospitalization

A course of family care therapy was given to 11 severely disturbed subjects in the home of an NIMH grantee over a 2-year period. The results of this study

[1] Prepared April 1958.

demonstrate the effectiveness of family milieu therapy as a substitute for hospitalization.

Drs. Eberhard W. Kronhausen and Phyllis C. Kronhausen, Columbia University, offer the technique of family milieu therapy as a solution to the overwhelming patient loads in most hospitals for the mentally ill. The investigators believe that the hospitals should be able to devote themselves almost exclusively to the treatment of those patients in whom organic involvements or other special factors make medical and nursing care necessary.

Acknowledging that the patients must usually be removed from the emotional stresses of their own family environments, the authors declare that most hospital environments are equally unconducive to therapy. Hospitals, they observe, generally have negligible psychological treatment facilities, and provide mainly custodial and protective services for patients. In addition, the social stigma attached to confinement in a mental institution, and the panic into which confinement often throws the patient, tend to cancel out any beneficial effects of hospitalization.

The therapy associated with residence in a supportive family setting involves the use of a variety of techniques, but depends for its results chiefly upon the impact of an emotionally hygienic family setting on the disturbed individual.

The adjustment of the family to alcoholism

An NIMH grantee has made a study of the way families handle the crisis of a developing alcoholism in the father, and has outlined a series of characteristic steps in the adjustment of the family to the problem. Understanding of these is important in rehabilitation and therapy.

Dr. Joan K. Jackson, Department of Psychiatry, University of Washington Medical School, associated in a friendly relationship of 5 years' standing with a group of women whose husbands were currently or formerly alcoholics. From the data she collected at their Alcoholics Anonymous Auxiliary meetings, she has analyzed typical family reactions to the problem of an alcoholic husband and father.

Normally, the crisis passes through a series of seven stages:

(1) Attempts to deny the problem: Early in the history of excessive drinking, both husband and wife try to explain episodes of excessive drinking as "normal" behavior. In addition, the wife tries to hide and deny the husband's drinking, since she feels that if it became widely known it would threaten the family's status in the community.

(2) Attempt to eliminate the problem: As the family becomes more socially isolated because of the drinking, all family problems are thought of as stemming from the drinking behavior. All efforts to cope with multiplying crises fail, and there is often a frantic effort to stabilize the family. Gradually all family goals, including permanent sobriety for the husband, become secondary to the short-term goal of having him sober today.

(3) Disorganization: At this stage, attempts to control the drinking are sporadic, or are given up altogether. Established roles in the family are dropped, and behavior is designed almost entirely to relieve tension rather than to accomplish any end.

(4) Attempts at reorganization: During this stage, some attempt is made by the family to survive as a unit, either with or without the father. At this point, the wife tends to take over the husband's roles as breadwinner and leader of the family. The wife tends to get control of herself and to function as a stabilizing force in the family.

(5) The decision to separate: Not all families enter this stage. Some stay in a stage of shifting equilibrium described in (4). This stage is usually reached when the wife can no longer depend upon the husband for any financial support, and is frequently precipitated by some threat of physical violence to the wife or children.

(6) Reorganization of the family: At this stage, the family closes ranks against the alcoholic father, much the same as any family does after the crisis of divorce or separation whatever the cause.

(7) Reorganization of the whole family: This stage is attained if the husband achieves sobriety, whether or not the separation has preceded. During this stage many problems of role reassignment appear, with the father wanting to assume his former status as head of the family, the mother frequently unwilling to relinquish the new roles she has assumed, and the children often unable to accept the father's resumption of his father role.

Understanding of these stages in the adjustment to alcoholism is important in the many phases of rehabilitation and therapy of the alcoholic.

The phenomenon of sudden death in animals and man

In an experiment that promises to be of unusual significance for the field of psychosomatic medicine, NIMH grantee Dr. Curt Richter of the Johns Hopkins University has attempted to clarify the phenomenon of sudden death frequently observed in primitive societies (voodoo death, death as a result of eating taboo food, death decreed by medicine men, etc.). Dr. Richter has succeeded in producing the same phenomenon in experimental animals, and infers from his study of the animals that it is related to overactivity of the parasympathetic nervous system.

After a series of chance observations of sudden death in rats, Dr. Richter attempted to set up laboratory conditions which would induce it experimentally. Caged wild rats were transferred to a black bag, were held in the experimenter's hand in an upright position, had their facial hair and whiskers clipped, and were put in a cylindrical swimming tank from which there was no hope of escape and in which they were forced to swim in a nearly upright position. Most of the wild animals died in a short period of time, while control domesticated rats survived in much greater numbers. All of these steps were studied as possible causes of sudden death and two appeared to be most important: Restraint in the bag and confinement in the swimming cylinder.

Electrocardiographic study of the rats, and control experiments using parasympathetic inhibitors and stimulants, and sympathicoadrenal and thyroid inhibition, all lead Dr. Richter to conclude that the sudden death response is one involving overactivity of the parasympathetic rather than the sympathicoadrenal system. The situation appears to be one of hopelessness rather than of "fight or flight," and the animals seem to die because they have literally given up hope. This is supported by an experiment in which wild rats are restrained or immersed for very brief periods and then released. These animals learn that the situation is not hopeless, and they become aggressive and try to escape, rather than succumbing apathetically, as do rats shown no hope of escape.

Dr. Richter theorizes that the utter hopelessness of the voodoo death situation to the primitive man is comparable to the hopelessness of the rat's situation, and that the man dies of parasympathetic overactivity. Incidents of sudden death of men at the sight of blood, upon hypodermic injection, or from sudden immersion in water sustain Dr. Richter's argument. The incidence of the sudden death response is much higher among men of more primitive societies, just as it is in undomesticated animals.

Dr. Richter's work, highly exploratory as it is, opens up a new area of research in the field of psychosomatic medicine, since it attempts to clarify the relationship between a particular psychological state and the physical response to it.

Stress, ADH activity, and ACTH release in man

It has been widely suggested that the antidiuretic hormone (ADH), released from the central nervous system as a result of stress, triggers the release of adrenal corticotropic hormone (ACTH) from the anterior pituitary body and starts the complex chain of physiological reactions to stress. NIMH and NHI scientists have now demonstrated that this mechanism is neither a consistent nor a necessary part of the individual's response to stress.

Emotional and physical stress have been observed to result in the release of ACTH from the anterior pituitary body into the bloodstream. Since no known nerve fiber connects the central nervous system with the anterior pituitary body, it has been postulated that the nervous system effects the release of ACTH through the action of some neurohormone which it releases. ADH has been seriously considered as the triggering neurohormone, since the pituitary body is closely connected to a possible site of ADH release in the hypothalamus by a portal venous system. Support for this view is provided by the fact that ADH in the form of vasopressin, injected into subjects, has always been observed to cause release of ACTH.

Dr. Roger K. McDonald and Mrs. Virginia K. Weise, Laboratory of Clinical Science, NIMH, and Dr. Henry N. Wagner, Jr., NHI, have now shown that ADH release is not the mechanism by which the stress-provoked central nervous system causes ACTH release. They exposed a group of normal subjects to a variety of stresses known to cause ADH release or ACTH release. The results of these experiments indicate that ADH release may occur without any increase in ACTH release. Furthermore, under some circumstances, ACTH may be released with no evidence of ADH release from the nervous system. The fact

that injection of ADH has always caused ACTH release can be explained by the violence of subjects' reactions to externally administered ADH. Apparently the symptoms its injection produces are sufficient to set off normal stress-triggered activities in the subjects' bodies.

As a result of this finding, investigators must continue to seek out the crucial mechanism by which the stress-stimulated nervous system can cause release of ACTH and set off the chain of physiological activity with which the body responds to physical or emotional stress.

Psychological effects of removal of the pituitary gland in women with metastatic breast cancer

Only limited and partially reversible psychological changes took place in a group of women whose pituitary glands were removed as part of the treatment of metastatic breast cancer, according to the report of an NIMH grantee.

Dr. Martha Schon, Sloan-Kettering Institute for Cancer Research, interviewed and administered a battery of psychological tests to a group of 20 women before and after removal of their pituitary glands. While all the women showed some fear of death, disfiguration, and mental or personality impairment before the operation, all wanted to go through with it, and all tolerated it well.

None of the women showed significant impairment in intellectual functioning after the operation. Some personality changes, however, did appear. The women tended to be more flexible in their way of thinking, more easily affected by emotional stimulation, and less exact in their perception of their environments. In addition, there appeared to be a decrease in aggressiveness in interpersonal relations, a decrease in depression, and a perceptible decrease in sexual interest. Some of the women also reported impairment in their ability to smell and to taste food.

Other results of the operation—increased weakness and fatigue, sensitivity to low temperatures, and increased irritability—tended to disappear upon administration of thyroid substitute hormones.

With postoperative hormone therapy, therefore, the psychological and intellectual changes which take place after removal of the pituitary gland seem to be both limited and, to a degree, controllable.

Neurophysiologic and pharmacologic influences on experimental neuroses in cats and monkeys

Resistance to stress and the ability to recover from neurotic episodes in cats and monkeys appear to be related to a variety of factors, among them age differences, species differences, the nature of the traumatic experiences which induced neurosis, and the presence or absence of brain injury.

NIMH grantees Drs. Jules Masserman and Curtis Pechtel, Northwestern University, performed a variety of experiments on large numbers of monkeys and cats, in an attempt to discover the bases of the animals' varying capacities to adapt to stress and conflict. The animals were first trained to respond to a number of different stimuli. The effects of several drugs on the animals were observed by exposing them to conflicts between their learned responses and the threat of traumatic experiences: electric shocks, jets of air and water, the sudden appearance of a toy snake, etc. Finally, the effects of a number of cerebral lesions on the ability to adapt to stress were investigated.

By and large the animals which showed the greatest resistance to stress and resumed effective behavior most rapidly when returned to nonstressful conditions were those that had first adapted well to laboratory routine and learned their first responses efficiently. Younger animals were more susceptible to the induction of neurosis than were older ones, and brain-damaged individuals showed decreased ability to deal with stress and conflict.

The ability to withstand stress is apparently related to a greater capacity to perceive, remember, and integrate experience, which is also responsible for better adaptability and more efficient learning. Younger animals, in whom this capacity has not yet fully developed, and brain-damaged animals, in whom it has been partially destroyed, deal less adequately, therefore, with stressful situations and more readily develop neurotic patterns of behavior.

Studies of this sort give valuable insights into the neurotic process in humans, and give clues as to the variables which may be important in determining how people react to stress and conflict.

Relation of blood pressure to the electroencephalogram in people over 60

An NIMH grantee has collected evidence which indicates that aged psychiatric patients with mild to moderate elevations in blood pressure have a higher incidence of normal electroencephalograms than those with low or average pressures. This suggests that elevated blood pressure resulting from arteriosclerotic conditions may serve to maintain normal electrical activity in the brain.

Dr. W. D. Obrist (Duke University), with Dr. R. H. Dovenmuehle, has analyzed the relation between blood pressure and electroencephalograms in a sample of aged psychiatric patients and in a group of aged normal controls. The aged psychiatric patients with elevations in blood pressure (150–200 systolic and 90–110 diastolic) show a higher incidence of normal electrical activity in the brain than those with low or average pressures, who tend to have abnormally slow encephalograms, particularly diffuse slowing. Although similar trends were shown in the sample of normal controls, the results lacked the statistical significance of the results with psychiatric patients. Dr. Obrist believes, however, that the difference between the normal and the psychiatric patient is significant.

Electroencephalographic differences between blood pressure categories were most pronounced in individuals with clinical evidence of cardiovascular disease. The investigators theorize that arteriosclerosis serious enough to cause the behavior changes seen in aged psychiatric patients (senile psychoses) is, in addition, likely to elevate the blood pressure enough to maintain electrocortical activity at normal levels. This finding opens interesting diagnostic possibilities for workers in the field of geriatrics.

Effects of LSD on the time sense of normals

Schizophrenic patients have often been reported as overestimating short durations of time to a significantly greater degree than do normal controls. An NIMH grantee, attempting to compare the LSD "psychosis" with true schizophrenia, has discovered that LSD appears to produce an alteration in time sense different from the time sense change in the psychotic.

Dr. William T. Lhamon and his associates at the Baylor University College of Medicine, Houston, Tex., administered LSD to four normal subjects. Where the schizophrenic tends consistently to overestimate time periods, Dr. Lhamon's subjects showed increased variability in the directions both of overestimation and underestimation. The four subjects reported an inability to make valid judgments of time.

This suggests that the reaction of the normal to LSD amounts to a loss of temporal frame of reference, while the schizophrenic's consistent overestimation suggests a shift to a definite, but invalid frame of reference. This difference in sense of time between the two groups indicates the probability of a qualitative difference between schizophrenia and the LSD psychosis.

Chlorpromazine affects normals more than schizophrenics

Schizophrenic patients appear to react less strongly to chlorpromazine, a widely used tranquilizing drug, than do normal subjects. The two groups do not appear to differ in the way they react to secobarbital, a well-known barbiturate.

In a comparison of the psychological effects of chlorpromazine and secobarbital in schizophrenics, Drs. Conan Kornetsky, Manson Pettit, Ronald Wynne, and Edward Evarts, of the National Institute of Mental Health, found that although chlorpromazine causes some impairment in psychological functioning in both groups, the impairment is much more marked among the normals than among the schizophrenics. Impairment was measured on a series of psychological tests after single doses and chronic administration of the two drugs.

Another difference between the two drugs is that tolerance of the patients to chlorpromazine appears very rapidly during chronic administration, while tolerance to secobarbital is not apparent after 2 weeks of chronic administration.

Among both subjects chlorpromazine produced a greater deficit on tests involving perception and motor response, while secobarbital produced greater impairment on a test related to intellectual functioning.

Grants for psychopharmacologic research

Drugs that affect the brain and central nervous system are being studied in 79 research projects in mental hospitals, universities, and other research institutions throughout the country, under the sponsorship of the National Institute of Mental Health. Grants for these projects total $1,685,219.

Most prominent among the studies being supported are clinical evaluations of drug effectiveness in such conditions as schizophrenia, emotional disturbances

of childhood, depressive states, and the neuroses. A variety of psychoactive drugs is being used.

Other investigations receiving support deal with: (1) The effects of drugs on psychological functions, (2) the effects of drugs on animal behavior, (3) the effects of drugs on brain function, (4) the biochemical mechanisms of drug action, and (5) synthesis of new compounds.

Grants totaling $13,693,845 awarded by Public Health Service for training mental health personnel

These grants, awarded since July 1, 1957, to medical schools and other institutions for training in such professions as psychiatry, psychology, psychiatric and school social work, and psychiatric nursing, are made possible through the training program of the National Institute of Mental Health.

Under this program the National Institute of Mental Health provides several types of support to help meet critical needs for professional personnel.

Teaching grants are used to establish, expand, or improve training in mental health at both graduate and undergraduate levels. Institutions supported under the graduate training programs include medical schools, hospitals, clinics, psychology departments of universities, collegiate schools of nursing, schools of social work, and schools of public health. In addition, these centers can apply for traineeships and stipends for promising individuals.

Ten years ago only 19 medical schools in the United States provided general undergraduate training in psychiatry, whereas 82 schools of medicine and 6 schools of osteopathy now teach psychiatry.

EMOTIONAL AND SOCIAL FACTORS IN MENTAL ILLNESS

Dr. FELIX. Mr. Chairman, there have been a number of developments over the past year which I think are of considerable significance and to which I should like to call the attention of the committee, if they will permit.

One of the most important developments, I think, has been the documentation of a belief which has been developing among professional workers for a number of years, and that is that while there are many organic factors responsible for mental retardation and mental illnesses, there are also environmental and psychological factors which play a vital and probably equal part in the production of the mentally sick or mentally retarded individual.

There does not appear to be a simple 1-to-1 relationship between organic changes in the brain, let us say, and the type of behavior which the individual demonstrates. Within limits, it appears that the environment, the social support, the type of stimulation which an individual receives, play a tremendous part in his total behavior and development.

I would like to illustrate this with 1 or 2 brief examples. We are, for example, quite excited about some new information concerning mental growth and development of both the normal and retarded child. We have known, for a long time, that an individual is born with a certain range of possible development, that there are many factors which influence the degree to which he develops from any particular point in his life. We are now securing evidence that these factors include the degree to which a child is accepted by his parents, by his community, the environment in the school, and the way he is accepted by his fellows, as well, of course, as to his physical condition.

We find that institutions which care for the retarded child can, if they provide proper emotional, intellectual, and social stimulation, effect very significant improvement of the behavior of these children, to the point of returning many of them to the community capable of productive work. The results depend, also, of course, upon adequate

physical and medical care and the absence of gross neurological damage.

There are also some hopeful developments involving the aged. We feel that there are certain crisis periods in the life of a person as he grows older; and, if proper supports can be given at such times, we can expect him, in most cases, to weather these crises with a considerable degree of success, even though there may be found after he has finally died a rather significant degree of organic change in the brain.

CRITICAL FACTORS FOR AGING

Among such crises, for example, is retirement. All too often, as we all know, the individual has worked with the throttle wide open until the day of retirement, and he meets his fellows for the last day, is given a gold watch and a pat on the back and wished good luck. He goes home and practically sits down. He is not prepared for this period which follows cessation of his lifework, with the result that he cuts off his contacts with the rest of the world to a great extent, and he begins to fall apart, as it were.

Another time which we find is particularly critical in the aged or elderly is bereavement, such as the loss of a spouse with whom one has lived for 40 or 50 years. If there is no provision in the survivor's life to support him over the next few months we find that he or she may begin to deteriorate quite rapidly because of the lack of proper contact and interaction with society which had been supplied throughout the partner's presence.

We feel that there is an optimum period, therefore, during which one can be particularly assisted in preparation for retirement. This period is earlier than might be expected, involving the decades of the forties and fifties. I do not know whether it is true with you gentlemen on the committee, but we frequently hear it said that one of the critical days in a person's life is his fortieth birthday.

He feels very frequently he has passed his thirties, and he has gone into his old age. Now that I have passed that period by more than a decade, I deplore the fact that it is so frequently thought that one passes into his old age at that time, because I think I have yet to reach old age.

However, following this gloomy day when one realizes that he is no longer young, we find that he is much more willing to talk about what is going to come after. He looks back on what he has accomplished. He realizes that, while he may not have accomplished all he had hoped for, he has laid the groundwork for most of what he will accomplish in this world, and that his pattern has been set.

At this point we can begin to assist him in planning for the kinds of activities that will follow—which he will pursue after retirement. These activities, we know, must be as psychologically satisfying as his life work has been, but not necessarily of the same kind.

Without such supports and without such assistance, we know that we can expect many, many individuals to approach retirement without preparation and that more of them than is necessary may face institutional care because they didn't plan while there was still time.

Now there are many other areas in which I could illustrate this need for environmental supports; but, as the time is moving along, I would like to mention 2 or 3 other developments, and then spend the rest of

my time, which you allot to me, speaking about the training report, which I think is the most important and significant thing in this past year.

RESEARCH ON RIBONUCLEIC ACID

One development of the year which has many possibilities not yet explored has been a closer approximation to the molecular structure of very complex substances known as nucleic acids. This has been achieved by making experimental use of manmade or synthetic substances which appear on X-ray analysis to be practically identical to naturally occurring nucleic acids, of which the body produces two kinds.

These synthetic substances, we have found, range themselves somewhat like a rope ladder. There are two or more chains linked with crossbars; these chains wind themselves in a helical or spiral arrangement. It is believed that the sequence of specific subunits (amino acids) making up the nucleic acid molecules has a significant effect upon how these substances behave in determining certain inherited characteristics.

Now one of the interesting things found is that if you bombard nucleic acids with X-rays, you may break important linkages within the molecule at certain places so that ultimately the molecule collapses, and instead of being a regular, orderly, helical structure, it becomes a wadded-up mass of atoms.

It is felt that this broken-down type of molecule now will have a different genetic effect. If it succeeds at all in producing a next generation, it will result in very different sorts of inherited characteristics than would have resulted from the original molecule.

Ribonucleic acid, we feel, has an important role to play, also, in a number of diseases and conditions with which we are concerned. We feel that this substance may have an important role to play in memory. It appears that the molecule itself acts as a scaffolding or skeleton, if you will, on which amino acids, the substances which are built up to make proteins, can be hung or attached in any of a large number of combinations. The result is that if these are attached in certain sequences, some kind of genetic memory is accomplished. Perhaps something of the same sort can occur during the life of an individual in relation to the proteins continually being built up within the brain, yielding a matrix upon which memory traces can be inscribed and recalled by proper stimulation.

BASIC RESEARCH ON NEUROLOGY

Probably the most significant development of recent years is likewise in the field of basic research. I mention this for two reasons. The first one is that I think its implications for work in mental health and in neurology are almost untapped as yet; and, the second is that I would like to emphasize the importance of basic research as a part of our program and that of all the rest of the programs of the National Institutes of Health. For years it had been thought that the nerve cell acted in what they call an all-or-nothing manner. That is, if a stimulus sent into the nerve cell were not of a sufficient magnitude to overcome what is called the threshold, nothing would happen; but

if the stimulus were greater than this, then there would be a discharge of a nerve impulse to all other parts of the same nerve cell.

Now we find that this all-or-nothing effect is limited to the middle (conducting) parts of the nerve cell. The two ends of the cell do not work that way at all. It appears that over numerous branches called dendrites, which receive impulses from other nerve cells there can be received a large number and variety of stimuli from widely different sources. The dendrites and cell body apparently store these and accumulate them and discharge them at intervals which depend upon the totality of a great many conflicting incoming signals.

In other words, the receiving end of the nerve cell acts as a computer of complex incoming messages which it "codes" into simplified nerve impulses which are then sent along the middle all-or-nothing conducting parts of the cell. At the terminal endings of this cell, the synthesized message is now "decoded" into a graded neuronal activity which contributes its effects (along with many others) to the succeeding nerve cells in any given nerve circuit in the brain or spinal cord. Thus each nerve impulse begins and ends as a response which is graded in character and not all or nothing.

Now with this improved concept we can come much closer to grasping the many very complicated kinds of nerve activities that are going on in the human nervous system. We can also get a glimmering of understanding of some of the hitherto completely inexplicable ways in which the brain may operate as far as thought and behavior are concerned.

Not only this, but around this nerve cell we find by introducing a microscopic instrument with a little wire in which will lead off the electrical impulse, that there is a field of electrical activity around these cells.

You may remember from your high-school or college physics the electrical field which is around a wire or around a magnet, something of this nature.

There is a similar electrical field around these nerve cells which seems, then, to influence the cells next to them; and in this way we get a smooth type of response.

LABORATORIES AT ST. ELIZABETHS HOSPITAL

As I told you last year, we are moving forward and will, we hope, by the early part of June occupy the new laboratories which we are establishing jointly with St. Elizabeths Hospital on the other side of town.

Key members of the staff are already here and have been formulating their experiments. We think this is going to be one of the most exciting developments of our program in the next several years.

I have just one or two other points, because I do not want unnecessarily to delay you, but I did think you would be interested in hearing of some of these things.

STATE PROGRAMS

The States, over the last 10 years, have done a most remarkable job in developing their mental health programs. A decade ago, when we started with the mental health work, the first appropriation for

assistance to the States was $3 million of Federal money, which was matched by the States and local communities with $2,400,000. As you recall, the law requires that the matching must be at least 50 cents of State money to $1 of Federal money.

In 1957, our appropriation was $4 million, $1 million more than in 1948. The State and local funds were $41,400,000 in 1957. This is an expansion from $2,400,000 to $41,400,000 in less than a decade.

There have been agencies established in the States devoted to the objectives that the Congress recognized for the country as a whole in establishing the National Institute of Mental Health. We feel that this money has probably been more effective on a dollar-for-dollar basis than almost anything else that has happened.

DIRECT USE OF FUNDS WITH STATES

Senator HILL. You mean the money that you have used directly with the States?

Dr. FELIX. That is right, sir. You see, they use this money as a sort of risk capital, I guess you would say. They want to try a new technique in the care of patients, for example, or in the establishment of a new kind of mental health program. They do not have the money in their budget. They go to the legislatures and the legislators say:

"This is fine, but give us some evidence that this is a good investment."

The State agency cannot do it until they have demonstrated it. Now they can use this Federal money matched with some of their own. Once it is demonstrated, then they go back and show their legislature what effect these funds have had upon their program; and as a result of that, they have received appropriations more nearly commensurate with their needs.

MENTAL HEALTH PROJECT GRANTS

Another area in which I think you might be interested is some of the developments under the mental health project grant program, authorized by Title V of Public Law 911, 84th Congress, which was the last omnibus health act. We have been really surprised at what has happened in this program.

At the present time we are supporting 62 projects in 22 States and 2 Territories, for a total of $1,904,749. Of these, there are about six States and Territories, and I would not want to name them here, from which we had never heard before as far as interest in research or in developmental work is concerned.

This is a brand new endeavor for these States.

These funds are assisting in the study and pilot or demonstration phases of such methods of care for patients as day-care hospitals, the open hospital type of program, after care of discharged patient, outpatient treatment, halfway houses and other such programs.

EMOTIONALLY DISTURBED CHILDREN

One last point before I turn to the training report, and that is this. I would like to mention what has happened in our new building with the emotionally disturbed children, which the Congress authorized us to construct 2 years ago.

The original group of children has now all been moved into this new halfway house. All of the children are going to school in the community, since they are now halfway between home and the hospital. They are attending public school.

We have had no serious problems with their adjustment in school. In fact, in some respects a few of them are doing a better job on a day-to-day basis, getting along in school, than some of the "normal" children, whatever that may mean.

They are leading much better adjusted social lives. They are going to friends' houses, friends whom they have met in school, and their friends are coming to the halfway house to visit them.

They have had, each of them, a birthday party, to which they have invited their friends from school and in the community. They have been, in turn, invited to their friends' homes for similar types of parties.

Now we will soon be ready to move into the next phase of this program and that is to take another group of children, using what we have gained so far in this program, hoping to shorten the period of time it has taken to bring these children to this point, analyzing our data as to why these things have happened, looking toward eventually setting up pilot projects of this nature in communities over the country—our point being, you see, that we want if possible, to bring this operation, or parts of it, down to where it is within the means of a community, within its public funds, to support and still do an adequate job; and this means going through, step by step, boiling it down, eliminating the unnecessary things, polishing it up so that it is an effective economical type of operation. I certainly hope that we may be able to do this.

MENTAL HEALTH TRAINING PROGRAM

Now, sir, I would like to turn, if I may, to the training report. We have submitted to the committee this document, "The Training Program of the National Institute of Mental Health, 1947–57," which we have produced in a quantity sufficient for you to use as you see fit.

I should just like to point out a few things from the summary of this. This report presents a comprehensive review of our training program at the end of our first decade of operation.

Ours has been, dollarwise, and probably in its ramifications, the largest training program at the National Institutes of Health; and therefore, it seems quite logical that ours would be the one which would be asked to report in order that you can get an idea of what has happened.

We feel that mental health training has improved significantly, both in quantity and quality, over this period of time.

As you will remember, when the program was first initiated there was an overwhelming demand for trained clinical specialists; and our first efforts were to provide training for clinical specialists in the fields of psychiatry, psychology, psychiatric social work, and psychiatric nursing. But as we went along it became apparent there were other needs that had to be met also. There was a desperate shortage of teachers. We had to get into the field of training teachers.

There was a shortage of research personnel and support for institutions who were training such personnel.

We have moved into these areas as we have had the funds and as the opportunities have been made available.

I might say that the increased appropriations recommended by this committee and the committee in the House, and which have been passed by the Congress, have made possible a very significant enlargement of this program.

You might ask at this point: What has been the impact upon training in this country? After all, there is always a danger that we might, by using these funds which are significant in size, persuade, institutions to engage in types of training which they otherwise might not wish to do.

We had been aware of this from the start, and it has been my particular dedication that this would not happen, that we would not buy schools if we had to turn the money back and close up the program. I feel more strongly than I can put into words here, the essentiality of academic freedom in this country if we are to preserve our democratic way of life.

This has been my concern over and above everything else, including the improvement of training: that we should not in any way damage the academic structure in this country.

USE OF CONFERENCE TECHNIQUE

We, therefore, have used part of our money to call conferences of the leaders in the academic fields in which we were attempting to improve training. We have called conferences of medical school deans. We have called conferences of the professors and the chairmen of departments of psychiatry, psychology, social work, and nursing.

We have asked them to examine the educational programs that train professional mental health workers. We have provided them travel funds, a place for them to work, and asked them to sit down for a week or so to look for themselves at how subjects were being taught and to make suggestions as to how their teaching could be improved to make it more effective and far reaching.

We have held at least one of these in each professional field. These conferences have been reported by the participants and widely read by the professional groups they concern.

I have submitted to members of this committee in the past, bound volumes of some of these reports in the field of psychology and psychiatry, for instance. Out of this has come new thinking by the people who will do the teaching, with no compulsion to do anything more than what they feel they can do and should do.

Then, out of this again, have come applications for training grants to try a different type of teaching program. Where these have been sound, where the individuals who are going to do the teaching are properly prepared, and where it has been felt by the Advisory Council and by the Surgeon General that this was a worthwhile endeavor, funds have been granted for the purpose.

As a result of this we have seen almost unbelievable shifts in the way teaching has been carried on and in the way we have been able to prepare people.

MEDICAL SCHOOL GRANTS

For instance, at the present time we are making grants of about $25,000 a year each to 82 schools of medicine and 6 schools of osteopathy to train the medical student before he becomes a doctor, in the mental health aspects of his practice which he will need to know, since this accounts for, depending upon how you want to look at it, from 40 to 60 percent of the problems that will come to his office.

A few years ago we polled, through the medical societies, physicians in three different States, asking them what proportion of their practice which came to their offices every day, they felt, had significant emotional and psychological elements, in addition to whatever other complaints they might have had.

The replies varied all the way from 40 to 65 percent of their patients who had emotional problems which needed to be dealt with, as well as whatever other difficulties they might have brought with them to the office.

Senator HILL. In that connection, I think it would be interesting to Senator Stennis and myself, as well as the committee, that you may want to supply this for the record, and we would appreciate it if you will give us a detailed breakdown of what these new or additional studies constitute that you have brought about in these medical schools.

Dr. FELIX. I will be very glad to do that.

Senator HILL. You furnish that: give us a statement to go in the record following your remarks, as to just what these new studies are, what they constitute, so to speak.

Dr. FELIX. I will be very happy to do that.

Senator HILL. I think that will be most interesting and helpful to us.

Dr. FELIX. I will also try to be moderate in those comments, although I have to admit right now I am intensely proud of what has happened. I can say this in all modesty.

Senator HILL. Do not hide your light under a bushel. We want to know the whole story.

Dr. FELIX. I am not hiding my light under a bushel, since I want to get a little credit, because I had something to do with this; but the person—and I want the record to show this—the person most responsible is the dedicated officer in the service who has been in charge in the Institute, Dr. Seymour D. Vestermark, the Chief of the Training Standards Branch. His vision, his patience, his concern to maintain the integrity of the schools has made this program possible. So I can say, in all modesty, because he did it, not I, that this is a program about which you can be most proud.

Senator HILL. You give us that story. I have referred to this before, and I repeat it again. We have to justify these funds.

Dr. FELIX. Yes, sir.

Senator HILL. And the more we know, the more we can tell about good results, dividends, so to speak, that have been acquired from these investments, the stronger we are and the better these different programs can go forward for the benefit of mental health and the other health problems of the people.

Dr. FELIX. I will be happy to do that.

(The information referred to follows:)

Influence of Mental-Health Training Program Resulting From Federal Aid Through the National Institute of Mental Health

The training program of the NIMH has been one of significant influence through its support of training and its stimulation of self-appraisal by the professions. Mental-health training, as a result, has improved both in quantity and quality during the past 10 years. A detailed report on the training program of the NIMH, covering the past 10 years, has been prepared. This report covers in detail the accomplishments of the program to date. The following describes a few of the accomplishments in the field of mental-health training which are the result of the training program of the NIMH.

Profound and extraordinary changes have occurred in the psychiatric aspects of education of students in medical schools as a result of these appropriations. Grants awarded to these institutions have enabled them to markedly expand their curriculums, hours of instruction, and increase their teaching and supervisory staffs for psychiatric education. In some instances the schools have been stimulated and encouraged to explore the possibility of developing a basic sciences department of human behavior similar to the basic sciences departments found in traditional medical education. Many institutions have been encouraged and stimulated to bring in social scientists and psychologists to strengthen medical education for the purpose of preparing the medical student to deal with mental illness in the community.

As a result of these appropriations the training of the medical student and his ability to treat mental illness in the community has undergone profound changes. Although much has been done to bring these capabilities to a high level of effectiveness, a great deal more is required if we are to bring them to the same level of effectiveness encountered in other areas of medicine.

The National Institute of Mental Health, through congressional appropriations, has been directly responsible for stimulating and encouraging the schools of multiple health to develop or expand mental-health training for all public-health personnel. In 1946 only 1 school of public health had such a training program for its students. Today 7 out of the 10 schools provide this type of training.

Although handicapped by a lack of teaching personnel it is anticipated that in the next few years all of the schools will provide this kind of training and expand their offerings so that the future public-health personnel can contribute to the development of effective programs of prevention in community-mental health. Stimulation in this area will be directed toward overcoming the serious lack of teaching personnel.

The psychiatric education of the nurse lags considerably behind that of the physician. There is a need also for the integration of psychiatric education with obstetric, surgical, pediatric, and public-health training of the nurse. At the undergraduate level of training funds made available by congressional appropriation have been awarded for the purpose of stimulating and encouraging the nursing schools to expand their curricula, hours of instruction, and increase their teaching and supervisory staffs for psychiatric education. With the funds available, 67 of the 200 collegiate schools of nursing offering the baccalaureate degree have been encouraged by the Institute to strengthen the psychiatric aspects of nursing education. The Institute has stimulated the nursing profession to move as rapidly as their resources will allow to upgrade the quality of undergraduate psychiatric nursing education.

There are a number of what are called problem areas of great social significance with a greater or lesser degree of relevance to the overall field of mental health for which there is a serious lack of trained personnel. These include such conditions as mental retardation, juvenile delinquency, alcoholism, and penology. There are relatively few trained personnel in the whole of the country to deal with these neglected areas of concern to the field of mental health.

The Institute has focused its attention upon these areas and has encouraged training centers to expand their present programs or to develop new programs to prepare professional personnel to provide service, to do research and develop programs of prevention in relation to these conditions. Such institutions as the George Peabody College for Teachers, at Nashville, Tenn., and the Langley Porter Clinic, at San Francisco, Calif., are training psychologists and psychiatrists to do research in the field of mental retardation. The Judge Baker Child Guidance Center is preparing psychiatrists, psychologists, social workers, and classroom teachers to deal with the problems of juvenile delinquency.

In the area of penology the lawyer plays an extremely important role in dealing with such problems as divorce, delinquency, adoption proceedings, commitment procedures for the mentally ill which have great significance for the mental health of the people of the country. The Institute has encouraged two law schools—Yale University and the University of Pennsylvania—to develop experimental training programs for law students into which are incorporated information and knowledge from the behavioral sciences that would increase the effectiveness of the lawyer to deal with these problems of disturbed interpersonal relations.

In another direction the Institute has stimulated the training centers to prepare and develop more professional personnel for academic careers in the mental-health disciplines. It is estimated that these appropriations have been responsible for training approximately 625 such individuals. There will be a need to stimulate the training centers to prepare an even greater number of persons for these careers, as the population of our country increases during the next several decades. The Institute is alert to this problem and will mobilize its energies in this direction, for unless adequate numbers of competent teachers, researchers, and supervisory personnel are available to provide adequate training to students, the professional academic programs will suffer, with a consequent slowing up of an adequate program to prevent mental illness and promote mental health.

The Institute has taken the initiative in calling together professional people including psychiatrists, psychologists, social workers, nurses, and public-health people in a series of conferences on mental-health training and education in these disciplines. These conferences have resulted in a clarification and redefinition of training techniques and programs for these professional personnel. As a consequence these conferences have resulted in a more rapid expansion and improvement in the quality of mental-health-training programs and the more adequate preparation of mental-health personnel for community programs of prevention in schools, courts, clinics, and public-health programs.

In the above there is indicated some of the accomplishments of the training program of the National Institute of Mental Health. There are other accomplishments in mental-health training which have been described in detail in the report on the training program of the Institute furnished to the committee.

REPORT ON TRAINING PROGRAM, 1948–57

Dr. FELIX. Now just a word or two with regard to what has happened to date. Between July 1, 1948, and June 30, 1957, there was expended in this training program a total of $33,650,156 in support of training in the various fields of mental health.

We have completed this survey, as you gentlemen on the committee directed, and putting our cutoff line as through June 30, 1956, which gave us a convenient period with which to work, we found that 93 percent of the total money was expended for the direct costs of personnel. You will find in this report, Mr. Chairman and gentlemen, on page 19, a chart showing this finding.

Now the remainder of the funds were expended for supplies, travel, equipment, and other indirect costs.

If you will turn to the next page, page 20, you will find a breakdown of how this 93 percent was expended.

There was 61 percent that was spent for teaching personnel, of which 50.3 percent were professional and 10.6 percent were nonprofessional—secretarial, laboratory aids, and so forth.

The remainder of the money, 39 percent, was spent on trainees. These were the stipends to assist bright and promising young men and women to receive this type of training.

FOLLOWUP ON TRAINEES

Senator HILL. Now just 1 minute there. Let's get this clear for the record. When you use the term "teaching" you mean for the further

training and education of those people, those people who are to teach?

Dr. FELIX. Yes, sir.

Senator HILL. Those people whom we must have if we are going to turn out the doctors and the medical men who will have the best possible knowledge and will be best equipped in handling these mental or emotional problems.

Dr. FELIX. That is right, teaching and research; yes, sir.

Now we found that stipends had been awarded to 3,939 different individuals through this period of time. We sent inquiries to each of them to find out what had happened to them.

We received responses from 3,117 of them, 79 percent of the total. We found that of this 3,117, 70 percent were engaged in their professions either in public agencies, that is, in public service, or as teachers or in research.

You will remember that the early part of the program was directed toward meeting the service needs: 48 percent are in public service, 16 percent are teaching, 6 percent are in research, 13 percent are still in training, and 7 percent are otherwise occupied. Some of these are dead. Some are, well, otherwise accounted for, I guess I should say. By that I mean that in addition to those who are dead—I hate to say this in the same breath—some are married and are mothers and have therefore left the practice of their profession. Some few have left the field and gone into other fields.

Of the total number, 10 percent are in private practice. Now of this 10 percent all but 3 of the 288 so engaged devote one-half day or more per week to teaching, research, or public service.

Our criteria are rather strict. Unless a person were spending 50 percent of his time, minimum, in an activity such as teaching or public service, he could not be accounted for as in that particular activity.

CAREER INVESTIGATIONS

Other aspects of the program about which you might have some interests are the career investigators. You heard me speak of these. The number of career investigators that we have supported to date—these are very carefully selected individuals, 20 of them so far—not one of them has left the field of research. All of them are continuing in research.

We have a little problem here which I expected and I do not know exactly how we will meet it, but we find that these individuals, because they are so well trained and because of the great need for such people in this field, are being importuned to accept positions as directors of research. You see, they have had 5 years of excellent training in research following their graduate training. We hate to see this, because this means a part of their energies are drawn off into administration and if you do not know what administration is, I am sure any of this group on my side of this table can tell you, but it is not productive research.

RESEARCH FELLOWS

Of the 424 research fellows, the fellows whom we have supported over this decade (we have provided support for from 1 to 4 years), 86 percent are continuing in research. The remainder have gone primarily into teaching or into practice.

There is appended to this summary, as you have directed, our forecast of what the future would hold and what we feel should come in the next several years.

FORECAST FOR FUTURE

Senator HILL. Where do we find that forecast?

Dr. FELIX. You will find that in the last paragraph on page 54 of the summary, Mr. Chairman. There is a detail of this, I might say, beginning on page 49. That is section VI of the report. It covers pages 49, 50, and 51. It is summarized in this last paragraph on page 54.

We feel that we shall lay increased emphasis, although our emphasis is now heavy, on the training of research workers and the development of programs for the training of these people.

We feel that this should not be done, however, at the expense of the program as it stands today, the training of the medical students, the training of the teachers of tomorrow, or the training of the people for the various public agencies, which are desperately needed. We feel that this should be in addition to that, as the time is ripe, as the people and the Congress, speaking for them, feel that we should move into this next phase. This is what we see as the way we should move.

There are three conclusions with respect to future needs: The first is a need for clinically competent personnel for public service activities in the field of mental health which is far from being met, and efforts must continue to increase and improve the supply of personnel of this kind.

Secondly, there should be augmented efforts made to increase the number of research people trained to make contributions to the problems and also further exploration of methods and ways of training such people. This means that we will have to do more pilot work in this area.

Then, finally, there is a great need for increased numbers of behavioral scientists, psychologists, and sociologists to contribute what they are able to contribute in their own particular fields to research in these areas.

NEED FOR 1-YEAR LEAD TIME

One last word here—and you will find this contained in the report—to do any of these things our experience over the last decade indicates that we must have at least 1 year lead time. By this I mean if the people would wish us to move in a certain direction, want us to train certain kinds of people, we cannot start to train these people the very day that the President signs the appropriation act. We have to negotiate with these schools. We have to set up a variety of mechanisms for developing the programs according to what appears to be the wisest and best way.

I mention that because, with a year's lead time, we can move. On the other hand, if given funds to work during that first year, it follows that the appropriations after that to carry on what we have developed should come or we are in trouble with the schools because we have started something that we could not finish.

Senator HILL. Excuse me right there, Doctor, if you are through with that phase of it, I think we might put this last paragraph on

page 54, which is your summation of future needs, in the record at this point.

Dr. FELIX. Sir, I had asked if I could put the summary in the record at the beginning.

Senator HILL. All right. In other words, that is already in the record. I just wanted to be sure that it is in.

Dr. FELIX. Mr. Chairman, the time is growing late. There is much more I could say, but I will conclude with that and I stand ready to answer any questions that I may be able to answer.

Senator HILL. I wish you would look over your transcript of your remarks and if there is anything else you think ought to be in this record, please put it in, if you think it will be informative or helpful, to the committee and Congress.

Dr. FELIX. I would be happy to do that.

NEW APPLICATIONS EXPECTED FOR 1959

Senator HILL. Let me ask you this question, Doctor. On the basis of past experience, how many dollars worth of new applications for research projects do you expect to be approved in 1959?

Dr. FELIX. I would expect somewhere between 5 and 6 million dollars worth, Mr. Chairman, on the basis of past experience.

Senator HILL. How much of this is provided in the budget now before us?

Dr. FELIX. About $2 million.

Senator HILL. You mean you had this year, the present budget you had, $5,201,000 and the present budget has reduced that down to $2 million?

Dr. FELIX. No, sir. We have a number of grants for which we have a moral commitment. We have moral commitments going into next year. This has been explained to you before, I am sure, but we have moral commitments totaling $9,203,459, covering 393 projects.

Now in addition to that our best estimate is that we will need a minimum of $600,000 more to continue projects whose moral commitment will be terminated this year but which will need to go on so we will pick them up again and probably renew our grants, but there is no moral commitment at the moment. We would estimate between 25 and 30 at least, somewhere in there, so that would mean $9,800,000 plus over our budget, which is spoken for immediately upon its being made available.

BUDGET SUBMISSION

Senator HILL. How much of this approximate $10 million is in the budget now?

Dr. FELIX. Our budget estimate which we are submitting here, Mr. Chairman, is $11,902,000 for research projects.

Senator HILL. According to the table I have here before me, it seems to me about $5½ million and the budget estimate only shows about $1½ million on that table there.

Senator STENNIS. Mr. Chairman, may I interrupt to say that I will have to leave on an important matter at this point.

Senator HILL. All right.

All right, Dr. Felix.

Dr. FELIX. Mr. Chairman, I gave you that $2 million in round figures. I had not calculated it out. I believe I should correct it and

say that I will have about $1½ million instead of the $2 million. I should stress also that these figures are based on 15-percent indirect costs, which was the House figure.

Senator HILL. If Congress decided to make a greater allowance, and as you know there is very strong insistence, strong insistent requests on the part of the medical schools and other research institutions, to increase that 15 percent, then that would mean your $1½ million would not go as far as you would contemplate with the 15 percent; is that right?

Dr. FELIX. That is right, sir. For the two amounts I gave you, the $9,803,000 would increase to $10,656,000, at 25 percent.

Senator HILL. Then do you feel you could well use some additional funds in addition to this?

Dr. FELIX. Yes, sir; if they were available, we could use additional funds.

Senator HILL. All right, I realize what your position is.

Now in section 6 of your report here on the training program, I want to congratulate you on this very fine report, Doctor.

Dr. FELIX. Thank you, sir.

Senator HILL. In there you point out the need for program expansion. Are there any funds in this budget before us for this expansion?

Dr. FELIX. No, sir; there are not. Our training estimates are the same for this year as for last, $13,300,000.

FUNDS FOR EXPANSION OF PROGRAM

Senator HILL. How much would you need for the expansion of the program?

Dr. FELIX. For the first year of this I would estimate around $2 million, Mr. Chairman.

Senator HILL. Then how would it go from there?

Dr. FELIX. Anything I would say now, I would not want to be held to too firmly because it depends on how things develop. I would estimate that this would increase somewhere around $2 million to $4 million a year for the next several years, depending upon how fast we move or how many obstacles we run into, but I would say certainly a minimum of $2 million additional this year.

Senator HILL. Doctor, we certainly want to thank you for your statement. I regret very much that an urgent matter that necessitated Senator Johnson's calling me from the committee took me away so that I did not get to hear all of your statement, but I assure you I shall read it fully and carefully. I want to say the same thing to Dr. Heller. I am sorry I had to leave, but you completed your statement and I assure you I will certainly read it fully and carefully, Dr. Heller.

I want to express my appreciation to both of you gentlemen.

Dr. FELIX. Thank you, Mr. Chairman.

It is always a privilege to appear here and we appreciate your interest and the courtesy you show when we testify before you.

Senator HILL. It is always a privilege to have you gentlemen. Thank you very much.

SUPPORT FOR MENTAL HEALTH RESEARCH

Senator HILL. Senator Lyndon Johnson has referred to the committee a letter addressed to him from Dr. Titus H. Harris, chairman, Department of Neurology and Psychiatry, University of Texas, with respect to research in mental health being conducted by the National Institute of Mental Health. Dr. Harris' letter will become a part of the record at this point.

(The letter referred to follows:)

THE UNIVERSITY OF TEXAS—MEDICAL BRANCH,
Galveston, April 16, 1958.

Hon. LYNDON B. JOHNSON,
Senator from Texas, Washington, D. C.

DEAR SENATOR JOHNSON: I know that you appreciate fully the importance of the mental health research that the public and, especially, psychiatrists are interested in carrying on at the present time. Mental disease is certainly, without question, one of the major health problems of this country and the world, for that matter, today, and it is vitally important that the increased research that is going on in this field be continued.

I just wanted to let you know of my particular interest, and that of all the members of my department here at the medical branch, as well as that of the psychiatrists throughout the State, in this question and hope that you will support the appropriation that is being requested of the Congress. This request, as you know, is particularly being supported by the National Committee Against Mental Illness, but we all have a very deep interest in it.

Very sincerely yours,

TITUS H. HARRIS, M. D.,
Chairman, Department of Neurology and Psychiatry.

COMMITTEE RECESS

Senator HILL. The committee will stand in recess until 10 o'clock tomorrow morning when we will go forward with the National Heart Institute to be followed by the Dental Health activities and other such activities.

(Whereupon, at 12:30 p. m., Tuesday, April 22, 1958, the subcommittee recessed to reconvene at 10 a. m. Wednesday, April 23, 1958.)

LABOR—HEALTH, EDUCATION, AND WELFARE APPROPRIATIONS, 1959

WEDNESDAY, APRIL 23, 1958

UNITED STATES SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D. C.

The subcommitte met at 10 a. m., pursuant to recess, in room F–82, the Capitol, Senator Lister Hill (chairman of the subcommittee) presiding.

Present: Senators Hill and Smith.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

PUBLIC HEALTH SERVICE

NATIONAL HEART INSTITUTE

STATEMENT OF DR. JAMES WATT, DIRECTOR, NATIONAL HEART INSTITUTE; ACCOMPANIED BY DR. JAMES A. SHANNON, DIRECTOR, NATIONAL INSTITUTES OF HEALTH; ALBERT F. SIEPERT, EXECUTIVE OFFICER, NIH; AND JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

"National Heart Institute

"[National Heart Institute:] For expenses necessary to carry out the purposes of the National Heart Act, [$35,936,000] *$34,712,000.*

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate	$35, 936, 000	$34, 712, 000	$36, 212, 000
Deductions:			
Comparative transfer to "General research and services, National Institutes of Health, Public Health Service"	−1, 120, 000	0	0
Unobligated balance, estimated savings	−13, 000	0	0
Total obligations	34, 803, 000	34, 712, 000	36, 212, 000

Obligations by activities

	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Grants:						
(a) Research projects		$19,364,000		$19,364,000		$20,150,000
(b) Research fellowships		1,375,000		1,375,000		1,375,000
(c) Training		4,240,000		4,240,000		4,740,000
(d) State control programs		2,125,000		2,125,000		2,125,000
2. Direct operations:						
(a) Research	453	6,396,000	453	6,376,000	464	6,540,000
(b) Review and approval of grants	35	515,000	35	504,000	38	538,000
(c) Training activities	18	130,000	8	75,000	8	75,000
(d) Professional and technical assistance	65	565,000	65	560,000	65	560,000
(e) Administration	14	93,000	14	93,000	16	109,000
Total obligations	585	34,803,000	575	34,712,000	591	36,212,000

Obligations by objects

Object classification	1958 appropriation	1959 budget estimate	1959 House allowance
Total number of permanent positions	585	575	591
Full-time equivalent of all other positions	20	14	18
Average number of all employees at end of year	520	[1] 523	[1] 541
Number of employees at end of year	611	[1] 601	[1] 615
01 Personal services	$3,223,000	$3,249,000	$3,373,800
02 Travel	186,500	186,000	192,300
03 Transportation of things	42,500	32,000	32,000
04 Communication services	34,000	34,000	35,000
05 Rents and utility service	16,000	11,000	11,000
06 Printing and reproduction	22,000	22,000	24,000
07 Other contractual services	221,100	141,500	145,700
Research contracts	23,500	23,500	23,500
Reimbursements to National Institutes of Health management fund	3,157,000	3,178,000	3,222,000
08 Supplies and materials	425,000	443,000	451,300
09 Equipment	244,300	178,000	195,800
11 Grants, subsidies, and contributions	27,082,000	27,082,000	28,368,000
Contribution to retirement fund	127,800	134,000	138,900
13 Refunds, awards, and indemnities	300	0	0
15 Taxes and assessments	20,000	20,000	20,700
Subtotal	34,825,000	34,734,000	36,234,000
Deduct quarters and subsistence charges	22,000	22,000	22,000
Total obligations	34,803,000	34,712,000	36,212,000

[1] Reduction in employment to absorb costs of scientist-engineer pay adjustment is not reflected in 1959 President's budget, but is shown here since it is a mandatory item.

Summary of changes

	Positions	Amount
1958 actual appropriation	585	$35,936,000
Transfers: Comparative transfer to "General research and services, NIH"		−1,120,000
Adjusted 1958 appropriation	585	34,816,000
Deduct nonrecurring costs:		
Estimated savings		−13,000
Rental costs to be absorbed by GSA		−5,000
Laboratory renovations and alterations		−100,000
1959 base	585	34,698,000
1959 appropriation request	575	34,712,000
Net change requested	−10	+14,000

	1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount
Decreases:				
Reduction in new research projects to absorb indirect costs		$1,344,400		
Reduction in miscellaneous objects to absorb costs of annualization of retirement contributions		7,400		$7,400
Reduction in miscellaneous objects to absorb costs of annualization of 1958 program base positions		47,500		47,500
Reduction in direct training activities	10	55,000	10	55,000
Reduction in employment to absorb costs of scientists and engineers pay adjustment		[1] 41,000		[1] 41,000
Subtotal decreases	10	1,495,300	10	150,900
Increases:				
For mandatory items:				
Retirement contributions:				
Annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)		4,700		4,700
Annualization costs for 58 additional positions authorized in 1958		98,200		98,200
Pay adjustment costs for scientists and engineers		[1] 41,000		[1] 41,000
Subtotal mandatory increases		143,900		143,900
For program items:				
Amount necessary to transport full indirect costs		1,344,400		
Research project in causes of atherosclerosis and strokes, anticoagulants, etc				786,000
Training grants in genetics, cv physiology, gas chromatography, etc				500,000
Direct research in lipids, surgical procedures, cardiovascular virology			11	134,000
Cost of increase review and approval services			3	20,000
Cost of increased program direction			2	16,000
Net change in reimbursement to National Institutes of Health management fund		21,000		65,000
Subtotal program increases	0	1,365,400	16	1,521,000
Total change requested	−10	+14,000	+6	+1,514,000

[1] Scientist-engineer pay adjustment is not reflected in the 1959 President's budget, but is included here since it is a mandatory item.

Effect of House Action

Activity No. 1 (a)—Research projects

The House provided a program increase of $786,000, to be used primarily for support of research into the causes of atherosclerosis and strokes, anticoagulant studies, and other studies important in combating diseases of the heart and blood vessels.

Activity No. 1 (c)—Training

The full amount requested of $4,240,000 was allowed by the House, and an additional amount of $500,000 was recommended for support of training programs in genetics, atherosclerosis, and other cardiovascular areas. This is an increase of $500,000 over the 1958 appropriation.

Activity No. 2 (a)—Research

The full amount requested of $6,376,000 and 453 positions was allowed by the House, and an additional amount of $164,000 and 11 positions was provided for cardiovascular research. This is an increase of $144,000 over the 1958 appropriation. The additional funds of $164,000 provided by the House will be utilized for research studies in lipid metabolism and cardiovascular virology, and for development of instrumentation techniques and devices for improvement of cardiovascular surgery.

Activity No. 2 (b)—Review and approval of grants

The full amount requested of $504,000 and 35 positions was allowed by the House, and an additional amount of $34,000 and 3 positions was provided in connection with grant program increases. This is an increase of $23,000 over the 1958 appropriation.

Activity No. 2 (e)—Administration

The full amount requested of $93,000 and 14 positions was allowed by the House, and an additional amount of $16,000 and 2 positions was provided for program direction needs. This is an increase of $16,000 over the 1958 appropriation.

Allocations of grant-in-aid funds for heart disease control

State or Territory	1957 allocations	1958 allocations	Estimated 1959 allocations
Alabama	$55,000	$55,400	$54,200
Arizona	18,600	19,600	20,200
Arkansas	39,400	37,900	36,500
California	105,200	108,500	109,700
Colorado	23,200	23,900	24,400
Connecticut	24,900	24,400	24,200
Delaware	11,900	12,000	12,200
District of Columbia	15,300	15,400	15,200
Florida	44,800	48,500	50,400
Georgia	57,600	57,000	56,500
Idaho	15,500	15,700	15,800
Illinois	80,900	79,600	80,000
Indiana	47,700	48,100	48,700
Iowa	36,300	36,000	37,100
Kansas	29,300	29,500	29,700
Kentucky	50,100	49,100	48,500
Louisiana	46,300	46,600	46,300
Maine	19,000	18,900	19,000
Maryland	31,800	32,600	32,900
Massachusetts	51,700	48,500	48,200
Michigan	67,500	69,100	70,400
Minnesota	41,300	41,000	41,500
Mississippi	49,300	47,500	47,600
Missouri	48,900	49,300	48,600
Montana	14,800	14,800	15,100
Nebraska	22,900	23,200	23,700
Nevada	10,800	11,000	11,100
New Hampshire	14,800	14,600	14,600
New Jersey	50,100	49,000	49,700
New Mexico	18,200	18,300	18,400
New York	132,200	130,800	126,000
North Carolina	68,300	69,300	68,800
North Dakota	17,000	17,000	16,900
Ohio	83,000	82,900	82,700
Oklahoma	35,000	34,100	34,000
Oregon	24,100	24,400	24,800
Pennsylvania	108,500	105,200	104,600
Rhode Island	16,600	16,200	16,500
South Carolina	43,200	43,100	43,100
South Dakota	17,000	17,300	17,500
Tennessee	56,100	55,700	54,400
Texas	99,800	101,700	102,100
Utah	17,300	17,500	17,900
Vermont	13,300	13,000	13,000
Virginia	49,500	48,600	49,200
Washington	30,900	31,300	31,600
West Virginia	34,700	34,000	33,500
Wisconsin	43,700	43,700	44,500
Wyoming	11,800	11,900	11,900
Alaska	12,100	12,000	11,900
Hawaii	14,100	14,300	14,500
Puerto Rico	51,300	50,100	49,000
Virgin Islands	2,400	2,400	2,400
Guam	0	3,500	3,800
Total	2,125,000	2,125,000	2,125,000

PREPARED STATEMENT

Senator HILL. The committee will kindly come to order.

We are glad to have with us this morning Dr. James Watt, Director of the National Heart Institute.

Doctor, you are an old friend of this committee and we are always glad to have you come back, and we will be delighted to have you proceed in your own way.

You may file your formal statement, if you wish.

Dr. WATT. Yes, sir; I would like to do that.

(The statement referred to follows:)

STATEMENT OF DIRECTOR, NATIONAL HEART INSTITUTE

Mr. Chairman and members of the committee, this statement will review for the committee progress in heart research and related activities and point out some areas which hold special promise for the future. During the present fiscal year, basic laboratory and clinical research has been strengthened both in the Institute's laboratories and in those of institutions receiving grants. Training programs have been enlarged to increase the supply of much-needed scientific manpower. Activities designed to assist in the application of rapidly developing knowledge from research have progressed.

Areas of heart disease in which the Congress has expressed particular interest have been the subject of intensive and extensive attack through the Institute's program. Among these is the field of high blood pressure, where there is being initiated a broad-scale study to evaluate drugs and to carry on related clinical investigations, and where the essential search for fundamental knowledge continues. Another area receiving research emphasis is the aging process, with the Center for Aging Research, established last year, providing a new focus for coordinated effort. Progress has been made in epidemiology and geographic pathology—the study of factors indicating how, when, where, why, and whom heart disease strikes. Intensive efforts have been made along the important frontiers of knowledge concerning hardening of the arteries—the most important and most complex heart problem, yet one where new clues and leads are being turned up constantly.

1959 REQUEST COMPARED TO 1958

These are among the activities of the National Heart Institute which the current fiscal year's budget of $35,936,000 has made possible. The request for funds for fiscal year 1959 is for $34,712,000. This will permit the consolidation of gains of the past year and maintain important activities in cardiovascular disease research, training and in the application of new knowledge. The 1959 request will provide for research project grants at the same dollar level as this year $19,364,000. In 1959 awards will be made in support of approximately 1,227 research studies.

Under the 1959 request of $1,375,000, 426 research fellowships awards will help alleviate the continuing scientific manpower shortage.

In the field of training grants, the Institute request of $4,240,000 will provide aid to institutions and individuals for undergraduate and postgraduate training in order to increase the numbers of trained research scientists, teachers, and highly skilled physicians in cardiovascular fields. The sum requested will provide assistance to 101 schools of medicine, osteopathy, and public health for undergraduate training; it will provide for 73 grants for postgraduate research and clinical training, including 395 traineeships. In addition, the sum will provide for some specialized postgraduate training and for grants for training in heart epidemiology and biometry, fields of especially short supply in trained manpower today.

Another important Institute activity is aimed toward the reduction of illness and death from heart disease by the application of available control methods and the testing and development of newer ones. Support for this program of aid to the States through grants is requested in the amount provided last year, $2,125,000; this will allow for continuing the development of community public health programs. This year there have been noteworthy developments in at least 39 States as a result of the State heart grants. A necessary complement to this program is the furnishing of professional and technical assistance, requested for 1959 in the amount of $560,000, slightly less than the current fiscal year's amount. The essentiality of this service to the States from the Public Health Service staff of specialists is shown by their extensive use by the States and by new programs developed with their technical advice and assistance.

INSTITUTE RESEARCH

The 1959 budget request of $6.4 million for the research conducted directly by the National Heart Institute itself holds substantially to the 1958 level of operations. This work, principally conducted at Bethesda, Md., represents a keystone of interrelated laboratory and clinical investigation of significance in

the total national research endeavor against heart disease. It is continuing to seek and add to basic knowledge of fundamental physiologic and biochemical processes, since fuller understanding of these must precede the development of better methods to prevent disability and death from heart and blood-vessel diseases. At the same time, more immediately practical therapeutic approaches continue to receive emphasis, as, for example, in the development of new devices for replacing surgically damaged heart valves and vessels and in the design of antiarrhythmic, blood-pressure-lowering, and diuretic drugs.

However, the major effort in the Institute's research program is being devoted to furthering knowledge of atherosclerosis, the most serious form of hardening of the arteries. Atherosclerosis underlies coronary heart disease and heart attacks and is the greatest single problem in heart disease. Intensive studies are seeking more knowledge of the handling of fats by the body as the best single lead toward an understanding of atherosclerosis and its prevention. Promising new tools are currently being brought to bear on the study of the chemistry and metabolism of fats, and this will facilitate investigation of the role of dietary fats in the development of atherosclerosis. The funds requested for 1959 will permit the sustaining of this and other essential work underway in the Institute's research program at about the same dollar level as in fiscal 1958, with carefully planned shifts of emphasis to take advantage of new clues as they develop from current research.

Some trends of the heart program have been shown in terms of their relationship to the budget and to particular program activities. A few statistics will demonstrate the current status of the medical problem being attacked—heart and blood vessel deaths, the leading cause of death in the United States.

PRESENT STATUS OF HEART DISEASE

Mortality from cardiovascular disease in 1956 was about 843,410 deaths—54 percent of all deaths. Because of the influenza epidemic, an estimate of 1957 mortality cannot be made at this time. Preliminary information, however, indicates that, as in previous epidemics of respiratory illness, deaths from cardiovascular disease will be substantially higher in 1957 than in 1956.

The gravity of the medical problems that constitute heart disease is indicated by a breakdown by type of the deaths it caused during 1956. Heading the list is arteriosclerotic heart disease, which includes coronary disease or heart attack victims—428,800 deaths. In second place is cerebrovascular lesions (brain blood vessel diseases and strokes)—179,110 deaths. Third is hypertension, with or without accompanying heart disease—84,460 deaths. In fourth position is nonrheumatic chronic endocarditis and other myocardial degeneration—62,110 deaths. General arteriosclerosis is fifth—32,420 deaths, followed by rheumatic heart disease and rheumatic fever—20,030. Various other diseases of the heart and circulatory system accounted for 36,480 deaths. Not included in the total were approximately 10,000 deaths from congenital malformations of the circulatory system and 2,800 from syphilitic aneurysm of the aorta. Thus, the enigmas presented by heart disease are complex and the solutions difficult.

However, tangible progress has been made in the understanding of each of the major diseases of the heart and circulation during the past year. Some of these accomplishments and developments in the program of the Heart Institute during the current fiscal year follow. These developments are presented to a large extent in terms of their relationship to the types of heart disease mentioned above.

INSTITUTE PROGRAM AS A WHOLE

First, though, it should be said that the progress reported in these brief summaries represents work of the Institute, both through its grants and its direct operations, as an interrelated whole. For example, in the field of atherosclerosis, laboratory as well as certain clinical investigations receive the major attention of the Institute's own research. The largest part of our research project grants are for studies in this field. Much of the activity of the heart disease control program of grants and technical assistance to States is occupied with advising the States of the latest status of and advances in knowledge of atherosclerosis. Through public and professional information activities the Institute collects and disseminates useful health information.

This kind of many-faceted program involves many skills and disciplines, ranging from physiology, anatomy, epidemiology, biometry, biochemistry to the clinical and public health sciences. It involves many types of programs and many

organizations, both public and private. It is encouraging to note that, in the past year, there has been a very real growth of cooperative interest and action on the part of many such organizations, including industrial and commercial groups, in the field of atherosclerosis.

Conferences between Institute researchers, other Government researchers, university and medical school scientists, and those from private firms and research centers have helped define problems and find ways to solve them.

For instance, better and more precise methods have been badly needed for analyzing lipids (such as fatty acids). Present methods for separating and measuring and studying lipids do not permit full understanding of the important aspects of fats and atherosclerosis. Through cooperative conferences and working sessions with industrial and agricultural researchers who are experts in lipids and their metabolism, new information has been gathered which will be of great benefit to scientists studying atherosclerosis.

PROGRESS AGAINST ATHEROSCLEROSIS

Perhaps the most interesting recent progress against this disease lies in the great concentration of attention on ways to lower the blood cholesterol content of the blood. There is now known to be a definite, although imperfect, correlation between atherosclerosis and the blood cholesterol. But it has also been definitely established that neither the fat nor the cholesterol in the diet is solely responsible. There is probably no one cause of atherosclerosis. However, for purposes of control, the fat in the human diet is more important than cholesterol.

All other things being constant, the cholesterol level of the blood does not change with the simple addition of cholesterol in the diet. Addition of sufficient amount of a saturated fat, generally one that is solidified at room temperature, however, causes a rise in the cholesterol level. Addition of a sufficient amount of an unsaturated fat, generally one that is liquid at room temperature, results in a lowering of the amount of cholesterol in the blood.

Studies are now underway exploring the effect of adding unsaturated fat to otherwise normal diets. Evidence to date indicates it would take a rather large additional intake of unsaturated fat to get the desired lowering effect, and it is not yet known whether this effect is accompanied by any prevention or control of atherosclerosis. To aid in public understanding of this, during the year a new booklet for the public, The Food You Eat and Heart Disease, was issued, containing facts about today's knowledge of diet and its relation to atherosclerosis as well as other types of heart disease.

Meanwhile, although the mechainism of the lowering effect of unsaturated fats on cholesterol is not yet understood, it has been found that it is not accomplished by slowing down the synthesis of cholesterol by the body. In addition, considerable insight has been gained into the mechanism by which fats are transported in the body, as well as into the relationship between protein levels and unesterified fatty acids. From still other findings it is heavily inferred that there is some damage to the blood vessel itself before cholesterol plays its role of facilitating the deposit of fatty materials in the vessel walls—and this, too, is the subject of further investigations, since the cause and mechanism of such damage are as yet unknown. It has been observed, however, that sclerotic deposits are found with greater frequency in areas where blood vessels are subject to greatest pressure. Another finding is that people with high blood pressure have more advanced atherosclerosis at a given age than persons with normal blood pressure.

These and other findings by the hundreds of researchers engaged in this field are increasing the body of knowledge rapidly. Although many of the pieces do not fit into patterns today, and most of this knowledge is not yet sufficiently explored for wide application, it is encouraging that such a large volume of new data is being gathered. Much of it is from fundamental explorations of normal basic processes and is essential to ultimate understanding of the disease.

On the more clinical side, studies are being conducted on such questions as the effects of heparin, an anticoagulant, in treatment of coronary artery disease; and a search is being made for any effective, nontoxic drug with which to inhibit the synthesis of cholesterol by the body. Many studies are underway adding information on diets and cholesterol in humans as well as in experimental animals. Surgical repair of disease blood vessels, although not removing the cause of or curing atherosclerosis, has also progressed with new operative techniques and devices.

In brief, while the causes of atherosclerosis are not yet fully known and while predictive diagnostic measures, cures, or preventives are not now available, many

complex factors are being delineated bit by bit, and 1957 has been a year of progress because of the acquisition of many scientific facts heretofore unknown.

HIGH BLOOD PRESSURE

In the field of high blood pressure, the year has also been marked by the uncovering of facts by basic research, but here more than in hardening of the arteries there have been advances in treatment. New drugs and combinations of new and existing drugs have been added for the physician's use in relieving patients suffering from high blood pressure, and at the same time understanding of how best to use these drugs and of their mode of action has begun to be accumulated. Much remains to be done here, however, through research, and in this area both the research conducted and that supported by the Institute has been substantially concentrated. Included among these is a large-scale clinical cooperative study of antihypertensive drug therapy, supported by a Heart Institute grant and involving a number of hospitals. This study, which is just being set up, will provide useful information on the values and limitations of new drugs for the treatment of hypertension.

New impetus was also given to hypertension research this year by the synthesis of a compound which appears to be identical with the natural blood pressure-raising substance found in the blood in some forms of high blood pressure. The possibility of preparing this vasopressor substance, angiotonin, in quantity may permit intensive study of the mechanism of arterial hypertension and of competitive drugs which, by blocking the action of natural angiotonin, may reduce high blood pressure of renal (kidney) origin.

Control of hypertension by drugs that are both powerful and safe has made further advances. Chlorothiazide, a potent diuretic introduced for the treatment of edema in congestive heart failure, was found to possess unexpected hypotensive properties by two research groups. The action of chlorothiazide appears to be unique in that it has a direct blood pressure lowering effect, potentiates other hypotensive measures, and by its diuretic action improves the failing heart and edema which complicate hypertension. Also, another drug, tetrahydrozoline, has been found effective in lowering blood pressure after oral administration.

Though the causes of essential hypertension remain unknown, the past year has produced clues to the possible basic biochemical mechanism producing the disease. The clues have come from studies of the chemistry of the brain centers which control blood pressure and other automatic body functions. The opposing stimulating and moderating mechanisms on the autonomic nervous system are mediated by centers believed to be under the control of chemical substances, known respectively as serotonin and norepinephrine. Substances which cause the release or prevent the action of these two chemicals have marked effects on the blood pressure, and it is possible that disturbances in the balance between these two types of centers may be responsible for the occurrence of hypertension.

New chemical compounds with the ability to block the metabolic pathways of both serotonin and norepinephrine have been discovered and are undergoing intensive study both as to their usefulness in elucidating the nature of the disturbance responsible for hypertension and for their therapeutic use in its treatment.

Recent reports that these blocking drugs are highly effective in the treatment of angina pectoris have caused the initiation of attempts to confirm this interesting and, possibly, highly important observation.

A complex system of interacting chemical substances has been found to be present in increased amounts in the blood of patients with hypertension. The system is identified by its ability to affect the contraction of the isolated frog heart and this preparation is used to evaluate the concentration of the various components and to follow their isolation. Studies aimed at isolating and identifying the components of this system are continuing as an essential preliminary to full evaluation of their significance.

A substance found in normal human urine has been found to be a powerful dilator of blood vessels. Studies of the isolation of this substance are in progress in parallel with efforts to evaluate its possible significance in the regulation of blood pressure. Its concentration has been found to be markedly reduced in patients with low blood pressure. Examination of its variation from normal in patients with essential hypertension is in its preliminary stages.

CEREBRAL VASCULAR DISEASE

Disease of the blood vessels of the brain, which includes strokes, accounts for some 180,000 deaths each year, and some 2 million persons are estimated to be incapacitated. Much of the research of the National Heart Institute is of significance to this disease because hardening of the arteries and high blood pressure are the greatest underlying causes. This field, of course, is also of strong interest to sister institutes, in particular the National Institute of Neurological Diseases and Blindness, which has mounted a strong program of research in cerebral vascular disease. Correlating endeavors, the two institutes have during the year supported several scientific conferences which have resulted in the interchange of latest knowledge, in the defining of research directions, and in institution of new research enterprises.

While prevention and cure for the majority of strokes await discoveries from research, much can be done to help the majority of victims. Many of the 2 million incapacited can be rehabilitated, and a large study has shown that perhaps 90 percent of stroke victims can be taught to walk again—and 30 percent to do useful work. Rehabilitation to some degree of most stroke patients can, furthermore, be accomplished by the family and the family physician.

The Institute, through its heart disease control program in the Bureau of State Services, has this year worked to stimulate and assist program throughout the country seeking to create a more positive attitude about cerebral vascular diseases and to provide services helpful to the physician and his coworkers (such as nurses, therapists, and social workers) in helping stroke patients. Both the technical assistance functions and the provision of grants-in-aid to the States are mechanisms which permit such productive activities. In this field as in others, such as rheumatic fever and congenital heart disease, these mechanisms aid worthwhile services like diagnostic clinics, training for health department personnel, physicians, and other medical personnel, and increasing the knowledge of the public.

Recognizing the need for public information on cerebral vascular disease, the Institute last year began preparation of a booklet on the subject titled "Cerebral Vascular Disease and Strokes." It describes and illustrates the nature of the disease and tells what can be done to help stroke patients. For the first 3 months after issuance early in the fall, requests from physicians, health department workers, hospital personnel, and the public have come in for an average of some 6,000 booklets per week; material and illustrations from it have been used widely by the press, major national magazines, radio, and television. Supplementary educational materials for health workers are planned on the subject of cerebral vascular disease in further support of State programs in the rehabilitation of stroke patients.

RHEUMATIC FEVER AND RHEUMATIC HEART DISEASE

In this field there has been real progress in the application of knowledge. Programs for the prevention of heart disease resulting from rheumatic fever are well established in many States, and this year some 14 States began new programs or expanded their prevention programs. By this means, thousands of children have now been diagnosed and treated for rheumatic fever and are being followed up to assure their continuing prophylatic treatment against recurrent attacks, 1 of rheumatic fever's chief dangers and 1 which can lead to heart valve damage. For those whose hearts have been already damaged, new surgical operations and improvement of older ones were developed from research. Diagnostic services aided by heart control grants and technical assistance provided through the States permitted the diagnosis of heart valve damage, and thousands of repair operations were done throughout the country with a high degree of success. Illustrating the effectiveness of the control work in rheumatic fever is the example of one citywide program: nearly 2,000 new cases of rheumatic heart disease were found, stimulating the State's legislature to appropriate $150,000 for the program.

Application of known measures appears to be accelerating the decline of rheumatic fever and rheumatic heart disease, but present measures are far from ideal and present knowledge concerning this disease is incomplete. Research con-

tinues to seek full facts of its causes and to develop better methods for its control.

In this latter area, a most promising development has occurred during the year aided by the operational research services of the heart control program. Today effective prophylaxis can prevent secondary attacks of rheumatic fever. But prevention of initial attacks, which almost always are preceded by a streptococcal or strep infection, has been very difficult. The antibiotics can eradicate strep. But there exists no quick, sure means for the physician to identify streptococci in sore throats and other illnesses. A quick, sure test for strep infections would mean that doctors could institute antibiotic treatment, eradicate the streptococci, and prevent rheumatic fever from making its first attack. A method developed by the Communicable Disease Center laboratory for rapidly, effectively detecting the presence of strep bacterium is being given preliminary tests through the heart control program's operational research assistance designed for just such purposes. This test makes use of a fluorescent antibody that tags strep bacteria so that their presence can be detected on a slide smeared directly from a throat swab from the suspected case. If evaluation support preliminary findings, the near elimination of rheumatic fever and rheumatic heart disease would be within the realm of possibility.

CONGENITAL HEART DISEASE

The advances of surgery to save and help persons with valves damaged from rheumatic fever and with some arteriosclerotic difficulties have been mentioned. But it is in the field of congenital heart defects that perhaps the most dramatic surgical gains of the year have been made. By their nature congenital abnormalities can be treated only by surgical repair, and then only when diagnostic and operative techniques, which may be applied to the specific type of defect, have been developed.

Congenital heart disease is no small problem, because many thousands today have heart or blood vessel defects they were born with—and other thousands are born each year. As basic and clinical research conducted and supported by the Institute seeks the causes of such congenital defects and means of preventing them, new and better diagnostic and surgical methods have also come from research to aid those who already have the condition and who can be given longer, fuller lives through surgery. Among the notable advance has been the development of the precise technique for locating the sight of abnormal openings between heart chambers; improved methods for measuring the effectiveness of the repair of a heart valve while the patient is still in the operating room; and improved techniques of surgery using artificial heart-lung machines.

The number of diagnostic tests of congenital heart cases made throughout the country today are in the many thousands. From these patients, are selected as needing or not needing surgery. The successful operations for congenital heart defects in the past year number in the thousands. So it can be said that while research and its application continue to be needed in this field, and will be strongly supported by the Institute program, the progress made and the human economic benefits derived in the past year have been considerable.

RESEARCH IN AGING

Because heart and blood vessel diseases have definite associations with age, gerontological research is an important part of the Institute's program. Several hundred research projects, directly or indirectly related to aging, were supported this year, and it is expected that even more research support will be concentrated in this area with 1959 funds. Through its own research, too, the Institute sustains one of the most comprehensive aging research programs in the country.

Additionally, the Center for Aging Research, established in late 1956 and administratively located in the Institute, serves to stimulate and coordinate research and training in gerontology both through the grants and the direct research in this field by all of the Institutes. A number of integrated aging research studies are underway at Bethesda involving the combined efforts of scientists of several of the Institutes; in addition, the National Heart Institute, National Institute of Mental Health, and others carry on separate studies, with frequent and regular interchange of information.

During its initial year the Center for Aging Research has been concerned with program planning, contacts with leaders in the field of gerontology, and participation in meetings and conferences. In addition to assisting development

of the aging program within the Department, the center has cooperated closely with the Gerontological Society in a survey to delineate research needs.

Because of aging's complex nature, the key to the study of aging is the mobilization of a broad spectrum of professional skills, available only in modern institutions of higher learning. Moreover, the cohesive forces of a university itself, its primary function of teaching, its community of scholarship, all together provide an ideal environment for such a mobilization of scientific effort. These considerations have justified an experiment. In planning for augmentation of the National Institutes of Health effort in the field of aging, it was decided to assist in the establishment of several large research centers operated by universities, should propitious circumstances arise to permit this. During early 1957 the Center for Aging Research worked closely with investigators at Duke University in developing plans for the first such university-centered activity. As a result, a research program dedicated to a multidisciplinary study of gerontology was established at that university on September 1, 1957, to be partially supported by a grant of just over $300,000 a year for 5 years. The Heart and Mental Health Institutes are sharing equally in this grant. The center is now working with several other university groups interested in developing similar large research programs.

The Center for Aging Research, in cooperation with the Atomic Energy Commission, has developed a plan for a series of conferences on the similarities and differences between physiologic aging and radiologic life shortening. The purpose of these conferences, to be held in 1958 by the American Institute of Biological Sciences, is to bring presently known information to bear on this question in order that the general problem of senescence may be more effectively elucidated. The conferences may result in a publication that will establish a current base line of knowledge in this area.

EPIDEMIOLOGY

This field has received a great deal of attention in all phases of the Institute program, both in direct operations and in grants. Already much information of value is being uncovered, and further knowledge from epidemiological studies will undoubtedly help to clarify many of the presently puzzling host of factors known to be associated with heart disease. A brief description of only a few of the many endeavors underway and some of their findings will serve to illustrate this field of work.

In the long-term study carried on by the Institute at Framingham, Mass., a random selected cross section of the adult population, who volunteered to participate, is being studied in detail to find out and analyze factors associated with the development of heart disease.

A finding of interest has been recently reported. "Silent coronaries"—heart attacks that generally go unrecognized—accounted for one-fourth of the coronary attacks that occurred in the study population in the first 4 years of the study. No significant differences of age, occupation, weight, blood pressure, or heart size were found to distinguish those who had "silent coronaries" from others who had more typical attacks. The heart damage was usually in a different location, however, and angina pectoris or heart pain did not result as often from the silent type.

More information upon this and other facets of the development of heart disease, such as nutritional relationships, will be forthcoming from this continuing study.

Through the grants program, steps have been taken to bring together pathologists from several countries to clarify interpretations of data and to provide a better basis for studies of geographic pathology of atherosclerosis. In addition, comparative studies are being supported to learn the pathological changes taking place in the human aorta (the great trunk artery leading from the heart) under different racial, cultural and environmental conditions in different countries.

Epidemiological studies of the incidence, prevalence, and factors involved in coronary heart disease and cerebral vascular disease are also receiving major attention through the technical assistance and grants to States program. These studies are conducted cooperatively with State and local health departments, heart associations, medical societies, and others.

One such study in a six-county area of North Dakota, executed primarily to develop procedures for community investigations of coronary heart disease, has been partially completed. Preliminary data are being studied to learn what characteristics are present in persons who have experienced manifest coronary disease

as contrasted with representative persons of the same age and sex from the general population of that area who do not have coronary disease. Following the pattern established in this study, Connecticut and New York are planning similar studies. Both of these States have a coronary death rate considerably higher than that of North Dakota. Comparison of the findings of their studies should reveal information on the degree of association of occupation, physical exercise, diet and, other factors related to this disease.

A study to determine the effect of the differing dietary habits of Trappist and Benedictine monks upon blood lipids and incidence of coronary heart disease has been initiated in Georgia, and its results should also cast further light on coronary disease development.

While not entirely epidemiological in nature, studies that will yield information of epidemiological importance were supported through grants this year involving cardiovascular effects and relationships of the Asian flu. A special research grant program established by the Heart Council made possible the rapid initiation of heart studies in the first major area of the Asian flu epidemic in New Orleans and subsequently at a limited number of other medical centers in the country. Clinical and physiological effects of virus infection on the cardiovascular system as well as epidemiological studies have been possible.

Epidemiologic studies are also in progress in cooperation with other State and local health departments to determine whether viruses other than German measles, particularly the virus of Asian influenza, cause congenital heart disease. The virus of German measles in expectant mothers is already known to be a causative factor in babies being born with malformations of the heart or blood vessels. If other viruses also are influential, or if they are not, the information derived from these studies will be of import and value.

SUMMARY

During 1957, further progress was made in the Institute's own research toward increasing basic and clinical knowledge of disease processes affecting the heart and circulation. Expanding research activities in universities and hospitals throughout the country also made many advances as a result of the Institute's comprehensive support of research through grants. Training programs contributed to an increase in both clinical and scientific manpower. Health department activities directed toward heart disease in conjunction with medical societies and heart associations continued to be stimulated and moved steadily forward in many States and communities.

Conduct of the Heart Institute's program during the year has been governed, as in the past, by balanced consideration of pressing needs and long-term objectives, weighted so as to assure sound and progressive development. Special attention has been and will be given to those areas recommended by the committee.

EFFECT OF HOUSE ACTION

The House recommended an increase of $1,500,000 over the President's budget. Of this increase, $786,000 will be applied to grants for research projects into causes of atherosclerosis and strokes, uses of anticoagulants, and other heart disease studies; $500,000 for training in genetics, atherosclerosis and other cardiovascular areas; $164,000 for direct research studies such as lipid metabolism, cardiovascular virology, development of instrumentation and surgical techniques; $34,000 for review and approval activities; and $16,000 for program direction.

GENERAL STATEMENT

Dr. WATT. I would like, if I may, to highlight a few of the areas of particular interest to the Heart Institute during the past year, and which I believe will be of interest to the committee.

I would like to talk to these three general areas of activity: First, the research work itself; secondly, the training activities; and thirdly, the area of community service or the application of our research findings.

RESEARCH WORK

This last year the research area has been characterized, in my own mind, largely by consolidation of our fundamental understanding of

many of these very complex problems. This is particularly true, I think, in the area of atherosclerosis where, with an extraordinary complex disease process, we have been getting information which really gives us some clear-cut directions for future work.

For example, this year we have learned a tremendous amount about the fats and the way the body manages fats. No longer do you find the scientist speaking of the simple split between animal fat and vegetable fat, but rather he is concerned with the specific fatty acids, the different components of the fat itself.

Actually, the need which this understanding revealed just about a year ago was the fact that our knowledge of chemical analysis of fats in the laboratory itself was not anything like as good as it was for many other substances, and during this past year there has been concentration on getting a better method of chemical analysis of fats.

COLLABORATION WITH OTHER CHEMISTS

One of the most heartening results of this year's work is the collaboration between our own chemists in Bethesda, chemists in the Department of Agriculture, and chemists in the food industry in meeting to discuss the problem of analysis of fats. They have proceeded vigorously toward a solution of these problems and the utilization of new instrumentation and techniques for doing it. This has been brought into most effective use during the year.

We are now able to talk much more specifically about the actual constitution of fats than was possible just a very short time ago.

In addition to the group which I mentioned, we also had a conerence of scientists from varied professional areas interested in fats and fats analyses, which met in Cleveland, Ohio, during the year, in which Dr. Irving Page was the chairman.

We had some 100 participants particularly interested in the problem of fats and its analyses who met and exchanged their ideas. A publication, Chemistry of Lipides as Related to Atherosclerosis, has now come out which brings up-to-date our knowledge of fats and also outlines areas for further research.

This is some distance from application to human disease in this particular field, but it is certainly clear that the unraveling of these problems is an essential step toward being able to modify this disease in man, and to lead ultimately to what we hope will be better treatment of those who are sick and, better still, a prevention of this illness for those who do not suffer from its effects at the present time.

EFFECT OF ENVIRONMENT ON ATHEROSCLEROSIS

In addition to looking at factors inside the body there has been a considerable development, and an increased interest on the part of a number of very competent people, in the effects of the environment outside of the body on the development of atherosclerosis.

For example, I recently visited Dr. Curtis Hames, a young practitioner of medicine in a small county in Georgia. He and one other man are the only physicians in the county. They are, as well as being the county physicians, the county health officers, and they run a small hospital there.

This one man has done a very fascinating job of beginning to study, you might say, two kinds of patients. One is the patient who comes to his office, and the other is the patient represented by the community that he serves. He has set up in his own office a research laboratory. We have now awarded a grant to help the research phase of his work. Some extraordinarily interesting findings, I am sure, are going to come from it.

One of the points he made in his observations is the extent to which he sees a major difference in coronary occlusion in the white and colored members of his clientele.

He finds quite a lot of atherosclerosis in the organs of the adult colored population when they die of accidental death, but he has far less of the complications of coronary occlusions in these patients than is true in the white population that he serves.

PROBLEM OF CLOTTING

His own feelings about this force him to look very carefully at the problem of what leads to formation of a clot in the blood vessel. It is something more than a simple formation of atherosclerosis, a damaged blood vessel, but rather it may well involve something in the clotting mechanism itself.

This observation from the clinical view, is related to some thinking that has been going on in the pathological field for some time, that the end result in the wall of the blood vessel may be due to a combination of damage within the blood vessel wall, and to the actual formation of a small thrombus, a small clot on the wall, which may then be incorporated in the wall by the growing of cells over it and scar tissue formation. Thus a damaged blood vessel may result from quite a different point of origin.

In other words, one type of damage would start from the bloodstream itself and the other would start from within the wall of the blood vessel itself.

Senator HILL. Let me ask you this: Would the one from within the wall wash off and cause trouble, or perhaps cause trouble where it is?

Dr. WATT. It could do both.

Actually, the damage that we are concerned with, on a long-range basis, is the extent to which the blood vessel becomes so damaged or obstructed it can no longer function.

Another area geographically somewhat near the work of Dr. Hames in Georgia is a study in South Carolina, where I am sure you are familiar with the coastal area, where a large group of Negro slaves were at one time located.

Senator HILL. As I recall, that is where your large rice plantations were.

Dr. WATT. Yes, sir.

This was a group that would be classed as the, field Negro, as contrasted with the house servants. They were from a different part of Africa. There has been relatively little intermarriage between the field-Negro group and the house-servant group.

There has been quite an interest evidenced to determine whether these people living under very comparable conditions but having somewhat of a different background, have a different type of arterial and vascular disease.

Similarly, in several parts of the country there has been an interest shown in looking at differences in the ways of life, which it is possible to distinguish if we really concentrate on it; but it is not simple or easy.

STRESS ON BLOOD VESSELS AND BLOOD CONSTITUENTS

A third area I might mention in the atherosclerosis field is the studies now directed toward trying to measure the effect of stress on the blood vessels and on the constituents of the blood. This, I am sure you recall, was mentioned previously as being one of the factors that must be considered.

Recently, there was an article in a magazine, Newsweek, I believe, in which some of the work of Dr. Selye was mentioned and his focusing on stress as a major factor in producing these lesions of the heart.

In experimental animals, they have been able to produce certain types of damage under the conditions of the laboratory. Here again, we have a long and difficult road to travel before we can say that this is applicable to man as he lives normally. There are a number of places where factors are stressful to people living under extraordinarily difficult conditions and where these studies are being centered.

Dr. SHANNON. Like the Director of the Heart Institute.

Senator HILL. Do you also want to include Members of the United States Senate?

Dr. WATT. Suffice it to say each of these different ways of looking at the problem of atherosclerosis is being explored, and during the past year we have had more evidence of establishing a firm point for exploration in this unexplored territory than we have had throughout the years of the Heart Institute.

HIGH BLOOD PRESSURE

Now, in the field of high blood pressure, which is another one of our major problems, the advances have been in the field of treatment, as well as in some of the attempts at basic understanding.

I think that I would like to emphasize that studies of constituents in the blood are really giving us a better understanding of the controls that the body can exercise over blood pressure itself without considering the treatment side.

This is not to play down the importance of advances in treatment, because there is no question at all that the current drug therapy has done a tremendous amount in opening up this field for the clinician to work with his patients, but we are making progress in an understanding of this disease, or this group of diseases, I should say, and I think that within the next year or two we will be able to speak of quite exciting developments in the way the body itself can control blood pressure. It is a complex thing.

Senator HILL. That is how the body will control blood pressure?

Dr. WATT. Yes, sir.

Senator HILL. If you reach that point, that will be a tremendous step forward.

Dr. WATT. Well, the body does control it now.

Senator HILL. Yes. I do not mean that.

Dr. WATT. When we understand how a body does this, then we will really know something about prevention, I am sure.

So long as we are only modifying one of the mechanisms that go awry, I do not believe we have the ultimate in development, but if

we can really discover the ways in which the body itself controls blood pressure, then I think we can have the kind of understanding which will enable us to lick the problem, rather than just temporize with it.

PREPARED STATEMENT

I have a prepared statement here which I think might explain a little more thoroughly some of the work being done in the field of hypertension which I might present to the committee, if it is your pleasure.

Senator HILL. Let the statement be included at this point in the record.

(The statement referred to follows:)

BACKGROUND STATEMENT ON PROGRAMS IN HYPERTENSION

The greatest clinical gains against hypertension have been made since 1950 through the development of drugs which lower blood pressure. These drugs have provided an effective opening wedge against hypertension to replace the hopeless empty-handedness of a decade ago. The gains already made, and the current promising rate of progress, indicate that the already lengthy list of available drugs will continue to grow for some time.

The promise of antihypertensive drugs has been apparent to the pharmaceutical industry since the medical profession first acknowledged the desirability of lowering high blood pressure. It is for this reason that the National Heart Institute has not heavily supported research to develop such drugs. The stimulation has been largely unnecessary. During 1956, however, approximately $100,000 was awarded on a limited and selective basis in this field to maintain a skilled corps of scientists for drug studies which were promising in terms of increasing knowledge of the disease.

The concentration of many competitive commercial organizations on the drug problem is giving the physician powerful and lifesaving weapons against hypertension, but it has also confronted him with a confusing and often redundant multiplicity of drugs with no objective and authoritative criteria by which to judge them. By 1957 the need for a large-scale and coordinated clinical evaluation of these drugs by a distinterested scientific authority had become acute.

Consequently during fiscal year 1957 the National Heart Institute, on the recommendation of its Advisory Council and Planning Committee, awarded grants totaling $919,000 for the evaluation, as well as the development and improvement, of antihypertensive drugs. The largest of these was a grant of $575,000 to a nationwide nonprofit organization—the American Hospital Association—to evaluate the clinical effectiveness of existing drugs.

The $575,000 grant to the American Hospital Association will not be needed again from 1958 funds, because its use in 1957 was postponed beyond the end of the fiscal year. But it is anticipated that $337,500 will be utilized from 1958 funds for the continuing support of other nonindustrial investigations in the development, improvement, and evaluation of antihypertensive drugs.

There is another more complex research problem in hypertension, inseparable from that of drugs, which also demands continued interest and support. This is the problem of our deficient knowledge of the fundamental nature and causes of hypertension. Progress in the basic research which provides this knowledge must not be divorced from, nor allowed to lag behind, the quest for better drugs.

The nature of our antihypertensive drugs, like that of any weapons, derives in large part from our knowledge of the enemy they are to be used against. Thus the deficiencies in existing drugs tend to reflect the deficiencies in our knowledge of hypertension.

The current drugs have something in common with primitive but effective scatterguns. None strikes with the rifle-like specificity we might wish for, because the real enemy—the underlying causes—are unknown. Such scattergun drugs may hit the immediate target, the blood pressure, but they also tend to strike indiscriminately at other body functions. Their unwanted side effects sometimes generate health problems which weigh heavily against their benefits in lowering blood pressure.

For example, the anticholinergic drugs—the most powerful in the three major classes—work by paralyzing the nerve ganglia that normally maintain the state

of contraction of the muscular walls of arteries. It is not likely that the cause of hypertension resides in these ganglia, but their paralysis does lower blood pressure and save life. Unfortunately, the action of these drugs on nerve ganglia also causes dry mouth, constipation, impotence, and a number of other unwanted side effects.

A total of $1,967,979 in research grants was awarded during fiscal year 1958 to investigators working in hypertension areas which included drug development and testing and other aspects of the hypertension problem.

One such grant to Dr. Irvine Page at the Cleveland Clinic assists his research group of closely cooperating investigators to work on many different aspects of the hypertension problem. His approach to the design of drugs is a rational one based on findings from biochemical and physiological studies of substances in the circulation of hypertensives which influence the blood pressure. The synthesis of angiotonin by Dr. Page's group a few months ago was one of the most important medical advances of the year. Angiotonin is a substance that raises blood pressure which Dr. Page found in the circulation of renal hypertensives a number of years ago. Its synthesis in the test tube now opens the possibility of making competitive antagonists—compounds chemically related to angiotonin which are specific for hypertension because they counteract the substance which causes it. This is simply one illustration of how a project grounded in basic research may be rewarding in terms of a rational approach to drug development.

Another important recent advance bearing on hypertension is related historically to Dr. Page's quest for angiotonin. Dr. Page's group synthesized an artery-constricting yellow substance from normal serum in 1948 because it was interfering with their search for substances peculiar to the blood of hypertensives. They called the substance serotonin because of its tonic effect on artery musculature.

Shortly after this a biochemist in the Heart Institute became interested in this substance and traced out each enzymatic step in its manufacture and destruction in the body. He also developed methods and tools for detecting it in tissues. This led to the discovery that the tranquilizers from rauwolfia, such as reserpine, which are widely used against hypertension, work largely through the release of serotonin in the brain. The continuing investigation now indicates that serotonin may be a nerve impulse transmitter, or neurohormone in the brain; that together with another neurohormone called norepinephrine, it may regulate not only blood pressure, but also heart rate, body temperature and emotional and other states. This opens the possibility that centrally acting drugs of various kinds work through the release of these neurohormones, and suggests that drugs might be sought on the basis of their effects on the levels of such brain substances.

These are just two examples of the fruitful wedding of basic research with the quest for antihypertensive drugs. Many others could be cited, for a large proportion of past support in this area has been for projects of this kind.

It is anticipated that, apart from drug evaluation studies, the intramural and extramural investment in research on hypertension will continue to be heaviest in general projects of this sort which provide needed knowledge of the disease as well as rational therapeutic approaches.

PROGRESS IN SURGERY

Dr. WATT. The final area in research, if I may develop it a little bit, was in an area where we have made tremendous progress in actual application to man. It is a case where our fundamental understanding of body physiology, understanding of the ways and means of working with the body under extremely difficult conditions, has made possible the tremendous advances that we have in surgery.

The surgeons today are able to adequately and effectively operate on conditions that were completely beyond the stretch of imagination of any of us who were involved in this field.

For example, I will tell you of an experience, at a meeting, that happened to me last week.

TUBING USED IN ARTERIAL RECONSTRUCTION

A man reached into his pocket and pulled out a piece of cloth, which was about 6 to 8 inches long. It looked like a tube, and then divided in two. It had obviously been handled a lot and as he was passing it around the room, he said: "I thought you all would like to see what it is inside of me."

Instead of what had been taken out, as is usually the case, he showed what had been placed inside. It was an orlon tube, a plastic tube, which the surgeon had placed inside of his abdomen to replace 6 or 8 inches of his aorta which had been taken out, down past the point where it bifurcates to go to the two legs. He had now had this in for 4 years. He had an aneurysm in the aorta, which was just on the verge of rupture. It was something bigger than my two fists when it was taken out and it had been replaced with one of these plastic tubes. He was going around the country having a wonderful time talking about how he was alive today, has had 4 years more of life as president of his company, and was going great guns because of this simple replacement of this blood vessel with a piece of orlon tubing.

Now, this particular type of tubing just was not available 10 years ago, much less to have a person survive to talk about it.

Senator HILL. I was just going to ask you this: What is the fiber content of that tubing? You can supply that for the record if you do not have it. I think it would be interesting.

Dr. WATT. A great many materials have now been evaluated for usefulness in replacing diseased arteries and veins, and there are several kinds in use. The living tissue, obtained from an arterial bank, work very well, but there is simply not enough to supply the greatly increased need. Synthetic fibers are used mainly, because they are inert materials and do not react with body chemicals to cause irritation. Among the materials being used are nylon, dacron, vinyon-N, acrilan, and teflon—all of these are suitable for patient use, but long-term experimental evaluation of them is still in progress at many surgical centers throughout the country.

These materials are woven into a fabric with a mesh small enough to prevent active bleeding, but large enough to permit cells to grow in between the strands, and then are fashioned into tubes—some are plain cylinders, and some are Y-shaped, for replacing a branching vessel. An outstanding contribution was made by Dr. W. Sterling Edwards of the University of Alabama, in cooperation with a local textile manufacturing company, in fashioning a seamless crimped tubing. The crimping provides for curving or bending of the graft, but prevents its kinking and shutting off the blood supply. All of the grafts are sutured to the patient's artery with silk or plastic thread, and serve merely as a scaffolding around which the patient's body actually builds a new vessel.

Inside the heart the most commonly used substance is polyvinyl sponge known as Ivalon. This is a spongy inert plastic which may be compressed into sheets or fashioned into various shapes. It is routinely used to close abnormal openings between the heart chambers or between the great vessels and the heart—such as the "golf tees" we have used. There has been some application of Ivalon, made in sheets and fashioned into tubes, in vessel replacement also.

PRESURGERY HEART EXPLORATION

One further point in the surgical field that I would like to emphasize and comment on, because of the outstanding work that is being done out in Bethesda, is the research involved in finding out better what is in the heart before the surgeon actually goes to the operating table.

When we first began to work on the heart, the simpler abnormalities were worked with; for example, mitral stenosis. The operation, while difficult, technically in terms of the patient's well-being, was relatively simple, once you got to the mitral valve. You simply slit it.

These operations are being done more or less routinely around the country by a large number of surgical groups, but now we have a different problem when we begin to tackle the defects of the heart that the patient is born with—congenital heart disease. There are many varieties of abnormalities and we had a great deal of difficulty in determining what abnormality is present before the operation, so that the surgeon could lay out his plans and work with it effectively.

This is accomplished now by a series of techniques, one of which won the Nobel prize—the cardiac catherization process—in which a thin hollow tube is threaded up the blood vessels into the heart.

Dr. Morrow, in charge of clinical surgery, has been able to improve on this to a very significant extent. He uses one technique which he has brought into perfection for getting into the left side of the heart. This has always been a problem. One can go in through the veins and come down through the right atrium into the right ventricle. Coming in through the artery you can get up into the left ventricle but not up into the left atrium.

This left atrium is one of the crucial points in determining what the pressure is and where the holes in the heart may be.

Dr. Morrow has been using the device of going down through the mouth and the trachea, actually to the point where it divides into two main bronchi. At that point the left atrium lies under the bifurcation, and by simply passing a needle through the bronchus into the atrium you can get these pressures in the left chambers of the heart.

He has done over 500 of these without the slightest difficulty.

Senator HILL. That has been over how long a period of time?

Dr. WATT. He has been working on this technique for several years. He first learned about it while training in Great Britain with Mr. Allison, who is a thoracic surgeon, and then came back to this country with us and developed this to the point of perfection that we now have.

He has extended it in a number of ways, including now a very rapid way of determining by the use of radioisotopes how much mixture of blood there is between the two sides of the heart.

When the patient breathes a small amount of radioactive krypton gas, it is absorbed into the blood and returned to the left atrium. If an abnormal shunting of blood from left to right chambers exists, the presence of the radioactive krypton is immediately detected within the right chambers by samples of blood withdrawn by cardiac catheter. Thus one can determine the presence and location of left to right shunts within a matter of seconds and while the patient is there, and it can be repeated, if necessary, if the reading does not come out right.

TRAINING PROGRAM

Moving on, then, Senator, if I may, to some discussion of the training program, I would like to just emphasize that this year we have moved definitely, very definitely, into the training for research rather than training of the clinical group itself.

One of the training programs which we have developed, and have supported for some time, is in the field of biometrics, in the field of pathology, and some of the sciences basic to medicine.

As you know, transfer of this training to the Division of Research Grants as a central program was authorized this past year, and this has now been done.

We, in the Heart Institute, are quite pleased with the number of these programs that have now been centralized in the Division of Research Grants, so that these basic sciences will be developed as part of the divisional program rather than simply in the categorical institute itself.

The Heart Council has been most interested in the development of these programs and we are delighted that it has taken this trend during the past year.

In the meantime, our own training program is now being concentrated on the extension of these basic skills into the cardiovascular field itself, and we will be in the position during the coming year to effectively bring these people into the cardiovascular field, as they have had this basic training.

We hope to continue to extend this training into other areas, such as physiology, genetics, and groups of this sort that up until now have been relatively inactive in the field, but which have a tremendous contribution to make, if people with that kind of training are put carefully into contact with the research people in the cardiovascular area.

WORK WITH STATES AND OTHER GROUPS

Now, finally, I would like to emphasize the area of work in application of our knowledge of heart disease with the States and with medical and public health groups in communities.

During the past year, the young men employed in our program from the funds in the technical-assistance program have been able to help start a number of programs where our ideas and methods are sufficiently well thought out to be applicable on a group basis.

In Illinois, for example, there has been a rather substantial development appropriation by the State legislature to actually bring about a better application of our knowledge about rheumatic disease focused on a program of prevention which was started by the Chicago Board of Health.

In that same area, the work with the heart association, and other groups of this sort, has led to other tremendously exciting developments in epidemiology. We are very pleased with the way this technical assistance activity is helping to develop field studies and community programs around the country.

Public health studies and community heart programs have been relatively slow in getting started, but I think we can say now without any question that the amount and extent of the opening up of this field makes certain that in the next few years when these results of our

basic research become available that they will be applicable in a systematic and effective fashion, with little or no loss of time.

TRAINING PROGRAM AT HEART INSTITUTE

I would like, if I may, to add this one further point:

I believe it was 2 years ago that the action of this committee enabled us to have a small training program directly within the Heart Institute itself, separate from our grants program. This has been a relatively small development, but I think it has done a tremendous amount of good, particularly in letting us bring cardiovascular understanding and knowledge for research into other parts of the Public Health Service, as well as into the Heart Institute itself.

We have worked with a number of our Public Health Service hospitals to bring about the training of their clinicians in this particular type of activity.

Now, I would be very glad to answer any questions that you may have, Mr. Chairman. I think this about summarizes the general area of activity which I would like to bring to your attention.

STATUS OF SURGICAL FACILITIES

Senator HILL. Doctor, you made a most interesting and informative statement. I do want to ask you this:

You may recall that 2 years ago we provided approximately $1,630,000 for surgical facilities, particularly for neurosurgery and for heart surgery. In our report on the bill containing the item I am speaking of, we had this to say:

> Similarly, research in heart surgery has advanced over the past few years to the point where the array of equipment required for the new operations on the interior of the heart and the major arteries has made earlier operating-room design obsolete.

What is the exact status of that proposed building now? Can you tell us that?

Dr. WATT. If I may, I would like to ask Mr. Siepert to comment on this.

Senator HILL. All right, Mr. Siepert.

Mr. SIEPERT. The present status, Mr. Chairman, of the surgical facilities is that on the 13th of March of this year the Budget Bureau gave its final approval of tentative plans developed by the contract architect, York & Sawyer, that the present schedule for the future requires 180 days to do the final drawings on the surgical facilities.

Senator HILL. You mean 6 more months.

Mr. SIEPERT. Yes, 6 more months, and that is a change from the previous estimate which we had from the York & Sawyer people, given as late as last Fall at which time all of our earlier calculations had been only 90 days to complete the final drawings.

FACTORS IN DELAY

We presented this to the York & Sawyer people as to why it should be double the time, and they stated that this is due to two factors:

The first is that in the interim, while the tentative plans were under study and negotiation with the Bureau of the Budget, the firm was obliged to assign their final design staff a number of other proj-

ects for which they had given priority on completion dates, and that they now have to schedule the final drawings for this particular facility in the light of that other business that is already underway in their firm.

The second factor is that they have found a number of very unique mechanical problems that have been introduced as they have gone further into the study of the way to make these surgical suites an optimum kind of facility.

We are all trying to get them to agree that the drawings might be ready in 5 instead of 6 months, but I thought we should present here what the architects are willing to be bound to at the present time.

Senator HILL. Well, it has been 2 years since we put this money up for construction in this bill. Where has this thing been all of this past 2 years?

Mr. SIEPERT. It has been involved in a protracted set of negotiations between, first of all, the NIH and the program people as to what they wanted to build; secondly, a series of negotiations with the Budget Bureau.

We first had questions by the Budget Bureau on the need for certain ancillary services which we had included in the surgical wing, and in the material that was presented to this committee at your request.

A second major factor in the delay is that you will recall, when this came up before the committee 2 years ago, the Director, frankly, was at a loss to suggest how this particular need for surgical facilities could be answered within our present facilities.

You asked whether we could, within a matter of 30 days, study this matter and come before the committee with the solution. That we did, but the period of time was probably too short for us to have looked at all the alternatives.

At any rate, we gave you a particular site location that we felt would do the trick. After having engaged one of the best architects in the country for this type of project we were asked whether they could restudy the site question to determine the best possible place to tie this into the Clinical Center. We agreed that they could, and that restudy of the site location actually delayed the project from March up until about July of 1957 while they made this further study, and it resulted in a new site, and we believe a much better and more effective site.

There will now be built a wing, actually in a round or wheel shape, which goes off from the Clinical Center at the southwest juncture of its two laboratory wings.

A third factor, and a major factor, in the delay in this situation is that approval of the tentative drawings was delayed from January until March of this year, largely over policy differences with the Budget Bureau, as to whether we could proceed with detailed plans when the cost estimates based on those tentative plans were apparently $150,000 in excess of the appropriated funds.

This was resolved, as you know, in March after you, Senator Hill, raised questions on this, I believe with the Department, and, on the assurance by the chairman of this subcommittee, that it would not disturb the committee if it found that the cost to do this job right were in excess of the appropriation, that this committee would be will-

ing to entertain and consider requests for additional funds to complete the project properly.

With that letter in hand the Secretary's staff, in negotiations with the Bureau of the Budget, obtained the agreement of the Bureau of the Budget that they would then approve the tentative plans, even though on our present cost estimates they would appear to be in excess of the $1,630,000 for the total project.

I think that brings us up to date.

DELAY CAUSED BY BUDGET BUREAU QUESTIONS

Senator HILL. Now, you accounted for the time from March 1957 to July 1957. Where was it from July 1956 until March? Where was it for all of that time?

Mr. SIEPERT. From August 1956, to March 1957 and really up to March of the current year, we were engaged in studies in answer to questions raised by the Budget Bureau, essentially on the main question of whether the areas of the surgical wing, other than the operating theaters themselves, are in excess of requirements; and that issue, first broached by the Budget Bureau in August 1956, was not resolved until March of this year.

This chiefly rested around the question of the size of the blood bank, which is an auxiliary service for the whole clinical center, but particularly for the cardiovascular surgery area.

We also had the problem of the storage facilities in the area and the clinical photography services.

Senator HILL. In other words, you received no resolution from the Budget Bureau on that, from August 1956 until March of 1958; is that correct?

Mr. SIEPERT. That is correct, on that issue.

Senator HILL. Of course, that issue held up the whole thing. I mean, all you needed was one issue resolved; is that not right?

Mr. SIEPERT. That is right.

Senator HILL. All right. That held up the whole thing.

In that connection, I will put in the record at this point a letter to Secretary Folsom, being a letter I wrote to the Secretary, in which I paid my respects to the Bureau of the Budget. This is just one more illustration of how the Congress has appropriated funds for construction and, by doing so, not only authorized, but really directed that this construction go forward, only to find out that the construction, nevertheless, was interminably delayed and defeated by the Bureau of the Budget.

There was an exchange of letters, and those letters will be put in the record.

(The letters referred to follow:)

UNITED STATES SENATE,
COMMITTEE ON APPROPRIATIONS,
March 7, 1958.

Hon. MARION B. FOLSOM,
Department of Health, Education, and Welfare,
Washington, D. C.

DEAR MR. SECRETARY: As you know, the 84th Congress, on the recommendation of our subcommittee, appropriated $1,630,000 for the construction of additional surgical facilities for the Clinical Center at the National Institutes of Health. In the committee report we stated the purpose was "to permit the construction of operating-room facilities adequate for the most modern surgical study of

neurological and heart diseases." The report further stated that "no physical handicaps should be placed in the way of further research in this field."

The committee was informed prior to recommending this appropriation, for which we had no budget estimate, that it would take from 90 to 120 days to complete plans and specifications and to award a contract; and 24 months for construction, with the expectation of having a building ready for occupancy on or about November 1, 1958. This appropriation became available on July 1, 1956, but more than 20 months later the preliminary drawings have not been approved. This is an unconscionable delay, not warranted by any circumstance.

Our committee has followed closely and with growing concern the various factors which have delayed progress on this structure. We understand that some weeks ago the architect, preeminent in the field of hospital architecture, completed preliminary plans which satisify all the program requirements. But the Bureau of the Budget has not seen fit to release additional funds for the working plans without assurance that the structure can be built and equipped within the $1,630,000 appropriated. The latest difficulty, we are told, is that the cost estimate of the facility as presently planned may be in excess of the available funds, and the Budget Bureau will release funds only if plans are altered by a diminution of space, an alternative undesirable to the Institute and unacceptable to this committee.

The completion of these surgical plans on their present scope would not, of course, be in violation of the antideficiency statute. It would however be short-sighted economy and a further, unjustifiable delay to redesign a smaller, less adequate structure. This committee determined at the beginning that this new construction should incorporate the most advanced planning for present and future needs—needs determined by the surgeons and NIH leaders and not by the staff of the Bureau of the Budget—of surgical work at the Bethesda research center. It recognized that the original cost estimates were only approximate and would in all likelihood change as the program requirements were studied in detail.

I can assure you of the committee's continued intent to see that this surgical facility is completed without the sacrifice of features the architect and the Institute leaders agree should be included, which features the Congress ratified at the outset. If the surgical building on the scale currently planned involves a greater sum than that currently available—in no small measure attributable to the protracted delays arising from the wholly unnecessary Budget Bureau minutiae of examination and review—I can assure you that this committee will give its prompt consideration and support to a supplemental request by your Department for funds necessary to complete the project.

In the future we need and expect to be kept better informed about this construction project. We have in committee files the architect's site plan study and his original rough sketches. We desire a copy of the architect's plans as now developed and the best current estimate of their probable cost. When more definite cost information is calculated, please furnish the committee this information also. Until there is definite word on whether additional funds will be needed, adequate precaution to include several alternates in the initial bids should make it possible to award the major construction contract without further delay. The proclivity of the Public Buildings Service to overestimate constructions costs has been demonstrated most graphically recently in a number of local building projects, including the building for the Bureau of Old-Age and Survivors Insurance in Baltimore, the bid for which was some $3½ million less than the estimate.

Let me in closing emphasize again the importance which the Congress attaches to accomplishing the expansion of surgical research in the heart and neurological fields. Provision of fully adequate facilities for this research must go forward promptly. I trust you will see to it that no further planning obstacles are interposed to a belated start on this project.

Sincerely yours.

LISTER HILL,
Chairman, Subcommittee on Labor–HEW.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
Washington, March 21, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Departments of Labor, and Health, Education, and Welfare, and Related Agencies, Committee on Appropriations, United States Senate, Washington, D. C.

DEAR MR. CHAIRMAN: This is in response to your letter of March 7, 1958, urging us to proceed with the surgical facility for the National Institutes of Health. Your letter recognized that the cost of this facility as designed by the architect in collaboration with the Institutes' scientists and administrators may exceed available funds and that you would support supplemental appropriations if necessary. With this assurance the Bureau of the Budget has authorized us to proceed with the development of working drawings and specifications. We plan to ask for bids for this project with alternates that will permit awarding a main construction contract with currently available funds. If our bidding experience confirms the need for additional funds a supplemental budget estimate will be submitted to the Congress.

We appreciate and share your desire to complete this important facility. We will do all we can to expedite the work and put these advanced research facilities in use.

Sincerely yours,

M. B. FOLSOM, *Secretary.*

COMPLETION DATE AND CONSTRUCTION COST

Senator HILL. Now, you spoke about 180 days for your plans. When would you expect this building to be completed for occupancy?

Mr. SIEPERT. Assuming, Senator Hill, that we get the plans on October 1 of this year, we will have the contract awarded and the notice to proceed, and that means that construction will start on approximately December 30, 1958.

This particular job has a construction schedule planned by the Public Buildings Service of 360 days; so that we show construction completion on January 1, 1960.

Senator HILL. And what do you now estimate would be the final construction cost?

Mr. SIEPERT. There has not been a new cost figure worked out, and there will not be one until final plans are completed, other than that which was discussed with the Budget Bureau based on the tentative plans.

At that time there was a $150,000 deficit in the figures; in other words, $1,780,000 in total, counting the plans.

CONTINUATION GRANTS

Senator HILL. Dr. Watt, what amount is required for continuation grants recommended for fiscal 1959, continued support of other projects active in fiscal 1958? How much do you need for fiscal 1959?

Dr. WATT. This is in the research projects?

Senator HILL. That is right.

Dr. WATT. It would take us, for the coming year, for those on which there are already commitments about $16,400,000, and for projects that are now active that may be expected to be recommended for continuation without prior commitment, another $750,000.

Now, we actually have somewhat more than the first figure on the books at the moment, but it is our estimate that a certain number of these will not reapply; therefore, we will not need the whole amount of the commitments to date.

Senator HILL. What amount do you estimate is required to activate new projects now recommended but for which grants have not been made because of insufficient funds?

In other words, what is your present backlog of approved research projects for which you did not have funds?

Dr. WATT. That is about $1,300,000, as I recall the figures.

Senator HILL. In this present fiscal year, 1958, how many new projects were approved and how much money would be required to activate all of these approved projects?

Dr. WATT. In 1958?

Senator HILL. 1958. That is the present fiscal year.

Dr. WATT. Yes, sir.

This year the approved projects were 329, and this would take $5,360,000. Those are the approved projects for 1958.

NEW PROJECTS ANTICIPATED

Senator HILL. Now, on the basis of 1958, what is the number of new projects you anticipate will be recommended in fiscal 1959, and how much will be required to make the grants for these projects?

Dr. WATT. I would anticipate approximately the same general level for this coming year, Senator Hill. My feeling is that there will be somewhere between 300 and 320 new projects, which would figure out to something over $5½ million, allowing for there to be a slight increase in the amounts per project, since this has been our experience over the years.

I would say it would take approximately $5,500,000.

Senator HILL. Then would you say that it would take to cover your recommended and anticipated new projects for fiscal 1959 roughly $24 million?

Dr. WATT. Yes, sir; that would be the amount we would expect to meet all of the approved projects for that year.

Senator HILL. What is the amount for training grants already recommended for this fiscal year?

Dr. WATT. We have now an unpaid recommended amount of $123,000, so that we would need the $4,240,000 we now have committed for continuation, plus that amount for this coming year.

NEW RESEARCH TRAINING PROGRAMS

Senator HILL. How many new research training programs do you anticipate will be recommended for 1959?

Dr. WATT. Between 40 and 50, according to present indications that I have of requests that have come in to us.

We have had preliminary negotiations with a number of groups. My guess, based on this type of information, is that it would take somewhere around $1,650,000 or $1,675,000, approximately that amount

Senator HILL. How much would you need, estimating your needs as a total, for those approved and to activate the new training programs?

Dr. WATT. That would be approximately $6 million.

Senator HILL. All right.

Doctor, I will make the same suggestion to you that I made to Dr. Heller and Dr. Felix yesterday as to your testimony:

If there is anything else you think that ought to go into the record which will add to it or strengthen it, particularly any emphasis that should be given to it as to the part played by the National Heart Institute, do not hesitate to put that in, so we will have the full story in the record.

Dr. WATT. Thank you, Mr. Chairman.

I do have here a summary of some of the more recent advances in research on heart disease which I hope would be made a part of the record and prove informative to the committee.

Senator HILL. All right, your statement will be included at this point in the record.

(The statement referred to follows:)

RECENT ADVANCES IN RESEARCH ON HEART DISEASE, JANUARY-MARCH 1958

ITEMS OF INTEREST ON PROGRAM DEVELOPMENTS AND RESEARCH STUDIES CONDUCTED AND SUPPORTED BY THE NATIONAL HEART INSTITUTE

Method for detecting mitral insufficiency developed at the Heart Institute

A method for detecting hidden leaks in the valve between the left chambers of the heart has been developed by National Heart Institute scientists.

The new method is described in technical detail in the Journal of Clinical Investigation by cardiologists Eugene Braunwald and George H. Welch of the Institute's Laboratory of Cardiovascular Physiology, and surgeon Andrew G. Morrow of its Clinic of Surgery.

To reveal the leak, these investigators raise the arterial blood pressure by injecting the artery-constricting hormone, norepinephrine, into the patient's blood stream at a carefully measured rate. Meanwhile they observe and record the effects of this increase in blood pressure on the pressure inside the left atrium.

A leaking valve is revealed if the pressure rises grossly in this chamber in response to the rise produced in the arterial blood pressure. In a normal heart the pressure rise in this chamber is slight because such gross changes in arterial blood pressure are largely excluded from the atrium by a tightly closing mitral valve.

The mitral valve, located between the left chambers of the heart, normally opens fully to let fresh blood from the atrium descend into the dilating ventricle. Then, when the vehicle contracts to pump this blood to the body, the valve closes to prevent backflow into the atrium. The mitral valve is the heart structure most often crippled by repeated attacks of rheumatic fever.

When deformed by rheumatic fever, the two delicate lips of the mitral valve often become "stenosed," or fused together at the edges so that they cannot open all the way to admit the blood when the ventricle dilates. Or they may fail to close tightly against the backflow of blood when the ventricle contracts—the leaky condition known as mitral "insufficiency." A combined condition of "stenosis" and "insufficiency" commonly affects the same mitral valve. The new diagnostic method is expected to be most useful against this combined condition where the abnormalities of insufficiency are often masked by those of stenosis.

Detecting hidden mitral insufficiency before operating for stenosis may be of vital importance, because the valve-splitting operation usually performed for stenosis may actually worsen the heart trouble if the valve also tends to leak.

The new diagnostic method is based on findings from experiments on the hearts of dogs in which mitral insufficiency was produced. In these dogs, the investigators used clamps to resist the ejection of blood from the left ventricle through the aorta. They found that the blood, when thus confined in the contracting ventricle, seeks the "back way out" through the mitral valve. If the valve had any tendency to leak, the blood rushing back through it into the atrium raised the pressure in this chamber much higher than when the valve did not tend to leak.

Instead of clamps on the aorta, the investigators use norepinephrine in patients to increase resistance to emptying of the left ventricle. Norepinephrine was chosen because it is safe. It is a hormone that functions normally in the body to govern the pressure against which the heart must pump, which it does by varying the caliber of arteries. Because its effects on the blood pressure are

fleeting, close control of the blood pressure both in the arteries and in the left auricle was possible at all times—an important safety advantage for the patients.

Following successful tests in dogs, the method was tried in 20 patients in the Heart Institute Clinic of Surgery; 7 of these had pure mitral insufficiency, 7 had pure stenosis, and the other 6 had the mixed condition.

In the 13 patients with insufficiency, atrial pressure increase averaged 47.8 percent of the rise in arterial blood pressure. In those with pure stenosis, atrial pressure increase averaged only 8.5 percent of the arterial pressure increase. This difference formed the basis for a method of detecting mitral insufficiency in difficult cases.

Inhibitor of cholesterol synthesis found to be potent inhibitor of adrenal function

While studying a series of compounds effective as inhibitors of cholesterol biosynthesis, a group of National Heart Institute investigators have uncovered one of the most potent known inhibitors of adrenal function.

Drs. Daniel Steinberg and Donald S. Fredrickson noted that rats receiving delta-4-cholestenone developed a remarkable enlargement of the adrenal gland, as much as 7 times normal. Delta-4-cholestenone had been shown to suppress cholesterol biosynthesis almost completely, and in order to explain the observed effects on a single basis, the scientists hypothesized that the inhibition of cholesterol synthesis was leading to inhibition of adrenal steroid synthesis. This would release the pituitary gland from the control normally exercised over it by the outpouring of adrenal steroids (a negative feedback mechanism) and thus lead to the observed hypertrophy.

It has now been shown by direct measurements of the rate of adrenal steroid output in the adrenal vein blood of the rat that delta-4-cholestenone does in fact inhibit adrenal function. Studies by Drs. Fredrickson, Ralph E. Peterson, and Steinberg, published in Science, show that the output of corticosterone, the major adrenal steroid in the rat, is decreased by well over 80 percent in animals receiving delta-4-cholestenone. These results are of particular interest for the light they may shed on the physiologic role of the cholesterol molecule.

Because of the close structural similarity between cholesterol and the adrenal steroids, a functional relation has long been suspected. Over the past 10 years, it has been shown by the use of isotopes that a large number of the adrenal steroids can be formed from cholesterol. Other evidence indicated, however, that the steroids could also be synthesized without the necessary participation of cholesterol, leaving uncertain the relative importance of cholesterol as an intermediate. These recent studies at the National Heart Institute support the view that cholesterol is an important precursor for the adrenal steroids, and that when cholesterol synthesis is impaired beyond a certain point, there is a consequent inhibition of adrenal steroid production.

These findings also indicate that compounds designed to lower blood cholesterol by inhibiting synthesis, now an important area of research in the problem of atherosclerosis, will have to be carefully screened for possible deleterious effects on adrenal function.

Origin of mechanisms for disposing of foreign substances in man traced to first land animals

Recently announced research findings shed light on the evolutionary development in the body of protective mechanisms that chemically alter foreign compounds and are responsible for the inactivation of most drugs.

The findings, reported by National Heart Institute scientists, Drs. B. B. Brodie, R. P. Maickel, W. R. Jondorf, and L. E. Gaudette, indicate that as animals evolved from aquatic to terrestrial forms, special mechanisms for disposing of foreign substances came into being, culminating in the highly efficient liver microsome enzyme systems in mammals. The findings were presented at the annual meeting of the Federation of American Societies for Experimental Biology.

Heart Institute investigators had previously discovered these enzyme systems which are found in liver microsomes. Their studies suggested that the microsomal enzyme systems were developed in the liver of ancestral species as a way of eliminating useless or harmful substances taken into the body with food. Hundreds of compounds of no nutritive value to the animal are swallowed with food and absorbed into the blood, and more are made by the bacteria of the digestive tract.

Many of these compounds would be toxic to the animal if permitted to accumulate and thus must be disposed of. However, the kidney, the major route for disposal of waste material, has a limited ability to remove fat soluble materials

from the body. Since many of these foreign substances are fat soluble, they would leave the animal only very slowly unless they first made less fat soluble by some sort of chemical change. Many of these chemical changes can be classified as oxidation. These mechanisms which function to rid the body of foreign substances are obviously necessary for survival.

In tracing the development of these systems in lower forms of animals, the investigators found that the mechanisms which convert fat-soluble substances to an excretable form developed to fill a need created by changes in the invironment of the animal. For instance, fish lack these mechanisms. But these animals do not need them for they possess gills which readily dispose of fat-soluble substances by diffusion into their watery environment. However, as land animals developed, water conservation became a major problem. The subsequent development of less permeable skin membranes went hand in hand with the need for enzyme systems capable of chemically changing foreign compounds into forms which the kidney could excrete.

A group of compounds—including amphetamine, methylanaline, aminopyrine (pyramidon) and hexobarbital (Evipal)—were found to be excreted by mammals only after oxidation to less fat-soluble derivatives. Many species of fish and amphibia including salamanders and frogs lack mechanisms to alter these drugs chemically, but excrete them unchanged (through the gills of the fish and the skin of the salamanders and frogs). The ability to oxidize foreign compounds first appears in the reptiles from which it was inherited by the mammals and birds.

Toads, while closely related to frogs, lead a terrestrial life and have skins which are very poorly permeable to water. Consequently, it is not surprising to find that the toads can oxidize drugs. The mechanisms used by the toads, however, are different from those found in mammals.

The emancipation of animals from the sea is associated with mechanisms that oxidize foreign compounds to excretable derivatives. Nature has had to solve this problem a number of different times with reptiles, with toads and with insects, for example. Each time she has solved the problem differently.

Phylogenetic studies were also made of the mechanisms that make foreign compounds known as phenols less fat soluble by conjugating or joining them with glucuronic acid or with sulfate. The investigators found that these processes are absent in fish; they first appear in frogs and other amphibia. They are also absent in tadpoles, the aquatic juvenile forms of frogs.

Evidence for abdominal pressorceptors found in Heart Institute studies

The existence of pressure-sensitive structures (pressoreceptors) in the area of the pancreas in cats, which contribute substantially to the normal regulation of blood pressure, is indicated in experiments by Drs. Stanley J. Sarnoff and Samuel I. Yamada of the National Heart Institute's Laboratory of Cardiovascular Physiology. Their findings were reported at the annual meeting of the Federation of American Societies for Experimental Biology.

Only two such blood pressure-regulating nerve pressure sensors have previously been known. One, the carotid sinus, is a network of nerve fibers originating in the wall of the carotid artery, just above the point in the neck where it divides to supply different parts of the head. The other is a similar network in the arch of the aorta, where this great artery curves from the top of the heart to supply all body tissues.

Responding to the stretching caused by the thrust of blood within their respective arteries, these receptors reflexly stimulate impulses that regulate blood pressure by altering the caliber of arterioles and the rate of the heart. Thus, increased pressure within these pressoreceptor sites stimulates nerve impulses that dilate arteries generally, slow the heart, and lower the blood pressure. Converely, lowering of pressue in these sites results in an increase in arterial blood pressure.

Such an increase in blood pressure was produced in cats by Drs. Sarnoff and Yamada by temporarily lowering blood pressure in various abdominal arteries. Lowering pressure in the pancreatic arteries produced an especially striking reflex increase in blood pressure—often greater than the increase that results when pressure in carotid sinuses is similarly reduced.

This suggests to the NHI investigators the existence of a third site of pressoreceptors—one in the abdomen that reports to blood-pressure-regulating centers the state of the circulation in organs of that region.

Drs. Sarnoff and Yamada believe that pacinian corpuscles in the abdomen may function in this capacity. These pinhead-sized nerve endings (named after

the 19th century Italian anatomist, Filippo Pacini) are enveloped in many thin onionlike layers of connective tissue. They are known to mediate deep pressure sensations from various locations in skin, connective tissues, tendons, and joints. In the abdomen, where they are found adjacent to the arteries that supply various organs—especially the pancreas—their function has long been in doubt.

However, 23 years ago two physiologists named Gammon and Bronk reported from studies at the University of Pennsylvania that increasing arterial blood pressure in the cats would cause increases in the number of impulses discharged by adjacent pacinian corpuscles. The observations made at NHI are in accord with and give physiological significance to the observations of Gammon and Bronk, Dr. Sarnoff explains.

In addition to the fundamental value of adding to knowledge of normal mechanisms for blood-pressure control, these findings may help explain the bizarre variations in blood pressure that accompany the manipulation of abdominal organs during surgery.

It is also possible, the investigators point out, that the continuing investigation of these receptors will reveal ways of activating them in animals so as to produce a better type of chronic experimental hypertension than has been available through operations on the two previously known pressoreceptors.

Estrogens and thyroid act together to protect against atherosclerosis

The protection that female sex hormones (estrogens) provide against cholesterol-induced atherosclerosis in the chick appears, from NHI grant-supported studies in Chicago, to depend on the presence of a normally functioning thyroid gland.

Drs. Ruth Pick, Jeremiah Stamler, and Louis Katz, of Michael Reese Hospital rendered groups of chicks hypothyroid by destroying their thyroid glands or by administering thiouracil, a drug which interferes with the production of thyroid hormone. Throughout the experiment, all chicks, including control groups with normal thyroid function, were maintained on a 1- or 2-percent cholesterol diet, which is known to produce coronary and aortic atherosclerosis in normal chickens.

All groups of hypothyroid chickens showed markedly higher blood cholesterol than the controls. This tended to be associated with intensification of aortic and coronary atherogenesis, the investigators reported. In hypothyroid chicks treated with estrogens, which are known to inhibit cholesterol-induced atherosclerosis, the thyroid deficiency grossly counteracted the ability of the estrogens to prevent coronary atherosclerosis.

Thyroid and estrogenic hormones apparently act synergistically to render the coronary vessels resistant to plaque formation, the investigators conclude in their report in the journal Circulation. The experiment demonstrates for the first time a counteraction of estrogen prophylaxis, they point out. This contrasts with previous experiments in which excess adrenocortical and male sex hormones, and deficiency of pancreatic activity, failed to influence the protective effect of estrogens on coronary atherogenesis.

NHI scientists find 3-methoxy norepinephrine in adrenal tumors

An amine, or nitrogen-containing chemical, closely related to the adrenal hormone norepinephrine, has been found in human tissues for the first time by investigators at the National Heart Institute. The new amine, 3-methoxy norepinephrine, is of basic interest because it is derived from norepinephrine and may play a role in the normal metabolism of this physiologically important amine in man.

Dr. Albert Sjoerdsma and William King, of the Laboratory of General Medicine and Experimental Therapeutics, and Dr. Sidney Udenfriend and Lemuel Leeper, of the Laboratory of Clinical Biochemistry, found the new amine in norepinephrine-producing adrenal tumors (pheochromocytomas) removed from patients with hypertension which had resulted from the tumors.

Norepinephrine (and its precursors and derivatives) is a particular interest to the Heart Institute, not only in connection with its well-known stimulating effects on the heart and blood pressure, but also because Heart Institute findings have implicated brain norepinephrine, together with another amine—serotonin—in the brain, in the central regulation of the two divisions (sympathetic and parasympathetic) of the autonomic nervous system. Thus "automatic" functions such as blood pressure, heart rate, and emotional states appear to be regulated by release in the brain of the two amines, norepinephrine and serotonin.

During their studies of the metabolism and functions of these amines, Drs. Sjoerdsma and Udenfriend became interested in the 3-methoxy derivative when investigators at the University of Utah reported a 3-methoxy end product of

norepinephrine metabolism in the urine of patients receiving norepinephrine injections to support failing blood pressure. Dr. Julius Axelrod, also of the National Institutes of Health, subsequently found, in rat liver, enzymes that convert norepinephrine to 3-methoxy epinephrine. These discoveries prompted the Heart Institute investigators to look for a 3-methoxy derivative in human tissues. They found 3-methoxy norepinephrine, as well as the usual large quantity of the parent amine, norepinephrine, in the adrenal gland tumors.

Their continuing studies on the amines are aimed at learning what role they they may have in the body—especially what part they play in the control of blood pressure and heart function.

New abstracting journal on aging research

A comprehensive abstracting journal on aging research will soon be published in English by the Excerpta Medica Foundation, with joint and equal grant support of the National Heart Institute and the National Institute of Metal Health. The awards are being made to Dr. M. W. Woerdeman, chief editor and chairman of the board of Excerpta Medica Foundation, Amsterdam, The Netherlands.

The new monthly periodical, to be known as Gerontology and Geriatrics Section of Excerpta Medica, will provide broad coverage and give appropriate emphasis to the medical and social aspects of the subject. Sources for material to be abstracted include approximately 1,800 of the world's most important medical journals. Pertinent literature of U. S. S. R. will be included.

The supporting Institutes will be invited to make recommendations to the chief editorial board concerning journals and categories to be covered, and on appointment of leading authorities, to serve as the International Advisory Board of Editors.

Current worldwide interests in the problems of aging and the rapid growth of the international literature has created an acute need for an abstracting journal comprehensive in scope and exclusively concerned with this multidiscipline area. The new periodical should provide valuable service on an international basis by stimulating interest in the study of aging and facilitating research in this area.

Antidepressant effect of iproniazid appears due to interference with an enzyme

Studies at the National Heart Institute indicate that the effectiveness of iproniazid (Marsilid) in treating depressed mental states may be due to the fact that this drug protects the neurohormones, serotonin and norepinephrine, from monoamine oxidase, and enzyme that normally destroys them in the brain.

Drs. Sydney Spector, Darwin Prockop, Parkhurst A. Shore, and Bernard B. Brodie of the Laboratory of Chemical Pharmacology have found that daily injections of iproniazid in rabbits cause the brain levels of both serotonin and norepinephrine to rise slowly, doubling or tripling over a period of several days in the brain stem, the location of the centers which these neurohormones are believed to regulate. Signs of central stimulation began to appear after the levels of both hormones in the brain stem had about doubled. These findings have been published in the journal Science.

Iproniazid was originally introduced for the treatment of tuberculosis, but it was soon found to have a stimulating effect on the central nervous system. This side effect has recently brought iproniazid into use as a mood elevator, or "psychic energizer," for the treatment of depressed mental states.

The fact that iproniazid will counteract the enzyme monoamine oxidase has been known since 1952. But it is only very recently that Heart Institute studies have indicated that monoamine oxidase is the enzyme primarily responsible for limiting the action of both serotonin and norepinephrine in the brain.

The tranqulizer, reserpine, used to subdue excited emotional states, was shown in earlier Institute studies to release serotonin and norepinephrine from their stores in the brain. These studies with reserpine and related tranquilizing drugs have prompted the theory that serotonin and norepinephrine normally regulate brain centers that help govern bodily functions which are beyond voluntary control—such as blood pressuer and heart rate, as well as emotional activity.

The new findings with the antidepressant drug, iproniazid, suggest that it also works through serotonin and norepinephrine by inhibiting monoamine oxidase, allowing serotonin and norepinephrine to accumulate in the brain.

Stress of examination week raises students' blood cholesterol levels

The average serum cholesterol level rose 11 percent during a 4-day examination week in 44 medical students studied by Drs. P. T. Wertlake, A. A. Wilcox, M. I. Haley, and J. E. Peterson of the School of Medicine of the College of Medical Evangelists. The study was aided by a National Heart Institute grant.

"As one might expect, these individuals vary greatly in their clinical and biochemical responses to stress," the investigators reported in proceedings of the Society for Experimental Biology and Medicine. Twenty of the subjects showed increases ranging from 16 to 137 milligrams percent over a mean control level of 213. Then showed increases ranging from 10 to 15 milligrams percent over their control averages of 223, and 14 showed increases of 9 or less over 216 for the 3-day control period.

Some individuals experienced a remarkable increase in their serum cholesterol, the investigators report. Particularly noted was one student whose control sample average of 259 milligrams present increased to 395 during the 4 examination days. On 2 of these days his serum cholesterol reached levels of 520 to 536.

"It is apparent that the situational stress of examination week must have had different meaning, and hence a different stress value for the subjects," the investigators noted. "Further investigation is needed to establish whether this increase is harmful or simply part of a normal and desirable bodily adjustment to mental and emotional stress."

Artery-dilating agent, resembling nitroglycerine, found in human urine

Normal human urine has been found to contain a powerful artery-dilating agent that resembles nitroglycerine in its ability to increase the coronary blood flow to the heart muscle.

This finding was announced at the annual meeting of the Federation of American Societies for Experimental Biology by Drs. K. E. Sussman, S. J. Sarnoff, and L. C. Sarnoff of the National Heart Institute, Dr. R. B. Case of St. Luke's Hospital in New York, and Dr. R. Macruz of São Paulo, Brazil. The work was done while Drs. Case and Macruz were with the National Heart Institute.

Using a test preparation of isolated living dog heart, these investigators found that less than half an ounce (10 cubic centimeters) of normal urine produces 2½ to 3 times the increase in coronary blood flow produced by 0.6 of a milligram of nitroglycerine, the usual dose of this drug taken by heart patients to dilate the coronaries and relieve their angina pectoris.

This artery-dilating activity was found to be largely lacking in urine from four patients with abnormally low blood pressure (hypotension) resulting from disorders of blood pressure-regulating mechanisms in the nervous system. The average artery-dilating activity from these hypotensive patients was less than 15 percent of the average activity from five normal control subjects, the investigators reported.

The role of the artery-dilating agency in normal persons and the exact significance of its lack in the hypotensives is not yet known. But the findings suggest two alternative possibilities to the scientists. Its deficiency in patients who have a defect of the central blood pressure-regulating mechanism could mean that the artery-dilating agency may play some part in the normal function of that part of the nervous system. On the other hand, changes in the output of the dilator substance may result from changes in the level of blood pressure. Its lack in the hypotensives might be a response to their abnormal blood pressure, rather than an aspect of its cause.

These possibilities are being explored at the Heart Institute in its continuing research into the mechanisms that govern pressure and flow in the arteries in the normal state as well as in diseases such as hypertension, and coronary heart disease.

Alpha lipoprotein thought to play role in dietary fat transport

Public Health Service scientists recently proposed for the first time a distinct role in dietary fat transport for alpha lipoprotein, one of the three major classes of fat-carrying molecules that circulate in the body.

Recent findings by Drs. Martin Rodbell and Donald S. Fredrickson of the National Heart Institute indicate that alpha lipoprotein may function specifically to transport newly absorbed fats from the intestine through the lymph to the blood stream. The findings were announced at the annual meeting of the Federation of American Societies for Experimental Biology.

The findings also revealed the existence and possible function of a new lipoprotein which is made in the intestine and forms a part of the chylomicrons, the large fat particles that appear in the circulation following a fatty meal.

Three major classes of lipoproteins—the chylomicrons, the alpha lipoproteins, and the beta lipoproteins—have been known for a number of years to scientists concerned with fat metabolism. By combining with such water-

soluble protein "vehicles," insoluble fats are transported, from digestion in the gut to metabolism in the tissues, through the various watery fluids of the body.

Past studies have shown that the chylomicrons are formed as digested fat is absorbed through the intestinal wall into the lymph vessels that drain into the blood stream. From their origin, the route they travel to the blood, and the fact that they appear only briefly in the circulation following a fatty meal, they have been considered the primary means of transporting fat from digested food to the tissues.

The transport role of the alpha lipoprotein has been more puzzling to scientists, for it has been observed to circulate continuously in the blood, where it has appeared to carry very little fat, compared with the chylomicrons. But radioactive tracer studies at NHI have now revealed alpha lipoprotein in another form—combined with the chylomicrons in the intestinal lymph vessels, where it apparently functions in transporting the fat to the blood when fat is eaten.

The newly discovered intestinal lipoprotein, is made in the intestine and incorporated into the chylomicron there, along with the digested fat. This lipoprotein appears to remain with the chylomicron during its journey through the circulation. For when the chylomicron disappears from the blood (presumably through capillary walls to the tissues) the intestinal lipoprotein seems to disappear along with it. This lipoprotein, the scientists speculate, may aid in transport across capillary walls.

Thus, scientists can now explain the possible transport functions of two of the three major classes of fatty particles in the circulation. The third large category, that of the beta lipoproteins, is also believed to play some transport role, for beta lipoproteins are known to increase in the blood of persons on a diet rich in animal fats. Although the new NHI findings suggest no transport role for the beta lipoproteins, they do indicate that this class is distinct from the chylomicrons.

NHI scientists find serotonin and norepinephrine in bananas

Bananas have been found by NHI investigators to contain large quantities of serotonin and norepinephrine. These amines have great clinical and biochemical interest but have usually been associated with animal, rather than plant, physiological functions.

Following a report by Dr. J. A. Anderson and his associates of the University of Minnesota that animals and men showed an increased excretion of 5-hydroxyindoleacteic acid (5HIAA) in the urine following ingestion of bananas, Drs. T. Phillip Wallkes and Albert Sjoerdsma of the National Heart Institute's Laboratory of General Medicine and Experimental Therapeutics, and Drs. Cyrus R. Creveling, Herbert H. Weissbach and Sidney Udenfriend of its Laboratory of Clinical Biochemistry, investigated in an effort to explain the rather surprising finding.

They found that bananas contain large amounts of serotonin, an average of 3.7 milligrams of serotonin in each, although Anderson and his coworkers had been unable to demonstrate serotonin (the immediate precursor of 5HIAA) or serotonin precursors in bananas.

Analyses revealed that bananas also contain surprisingly large quantities of both norepinephrine and dopamine. Though 5-hydroxyindoles have been found in plants previously, this is the first demonstration of norepinephrine in plant material.

The new findings have encouraged the NHI group to administer large quantities of these amines to patients, thus facilitating their study in human metabolism. The findings also indicate that bananas should not be fed to patients before collecting their urine for diagnostic tests for malignant carcinoid and pheochromocytoma, because this might lead to false positive diagnoses of these tumors.

Substance from rhododendron may represent a new class of hypotensive compound

National Heart Institute studies of acetylandromedol, a substance isolated from the leaves of *Rhododendron maximum*, suggest a steroidlike structure for this powerful hypotensive compound.

Acetylandromedol was found some time ago by National Heart Institute scientists to be a potent blood-pressure-lowering agent. Minute quantities of it (5–10 micrograms per kilogram) were found to lower blood pressure 20–40 percent in dogs. Levels slightly higher were required to lower blood pressure in humans.

Continuing studies by Drs. Evan C. Horning and Charles C. Sweeley of NHI's Laboratory of Chemistry of Natural Products, who are investigating its structural characteristics, suggest that acetylandromedol may have a steroidlike skeleton. Their observations, together with the fact that acetylandromedol contains no nitrogen, indicate that it may represent a new class of hypotensive compounds. Thus the possibility is opened of finding chemically related steroids, or steroidlike compounds, which act directly in blood-pressure-regulating mechanisms in the central nervous system.

Heart defects detected by use of radioactive gas

Research at the Public Health Service's National Institutes of Health has shown that krypton 85, a radioactive form of a harmless inert gas, can be used to detect abnormal openings in the wall of muscle dividing the right and left chambers of the heart. More than 100 patients with proved forms of heart disease have been studied, and krypton 85 has made possible the correct diagnosis in every instance.

Left to right "shunts" of blood which result from defects in the partitions of the heart are the commonest form of congenital heart disease. Accurate knowledge of the presence and location of these defects is essential for corrective surgery.

The new diagnostic technique was developed by research surgeon Richard Sanders, a staff member of the Clinic of Surgery of the National Heart Institute. The discovery was announced in the technical journal Proceedings of the Society for Experimental Biology and Medicine.

Experiments using a different radioactive inert gas successfully in detecting heart abnormalities are reported in the same journal. Dr. Sanders bases his choice of krypton on its complete inertness and ready availability. In addition, 99 percent of krypton 85's radiation is nonpenetrating, making elaborate precautions for its use unnecessary, even for medical workers who are repeatedly exposed.

Krypton 85 can be measured instantly and accurately with an instrument similar to a Geiger counter after the gas has been introduced into one side of the heart and some of it has been recovered from the other. This makes the test simpler than any previous laboratory techniques, and the test is more accurate than the standard techniques now being used in most heart clinics.

In developing the technique, Dr. Sanders used dogs with heart defects which produced left-to-right shunts. He introduced radioactive krypton into the left side of the heart by having dogs breathe it, mixed with air, from an ordinary rubber anesthesia bag. The radioactive gas was instantly picked up by the bloodstream from the lungs and carried to the left side of the heart, along with normally oxygenated blood destined to supply the dog's whole body.

In a perfect heart, this blood does not enter the right side of the heart until it has completed the circuit through the arteries to the body and returns through the veins into the right side of the heart ready to be sent, from the right side, to the lungs for a new oxygen supply.

In Dr. Sanders' experimental animals, the normally high pressure in the left side of the heart forced the blood not only into the artery leading to the rest of the body, but also through the holes in the partition between the left side of the heart and the right. This robbed the dog's body of part of its needed blood supply, as in a human being with congenital heart defects in which the blood is shunted from left to right.

Using the technique of catheterization, with his experimental animals, Dr. Sanders threaded a length of tiny plastic hose through a neck vein feeding into the right side of the heart. Through this tube, he could draw blood directly from the right side. In a normal dog breathing radioactive krypton, samples of blood showed very little radioactivity; the radioactive gas had been largely dissipated on the long journey of the blood around the body.

When Dr. Sanders tested blood from the hearts of the dogs with heart defects, however, he found it to be much more radioactive, which showed the presence of the defects. By "aiming" the tip of the catheter at different parts of the heart, the location of the defect can be determined.

Many heart defects involving left-to-right shunts can now be repaired by surgery, but more than 1,000 persons, most of them children, die of these defects each year in the United States, and thousands more are crippled.

Publication of symposium on lipids as related to atherosclerosis

Proceedings of the NHI grant-supported conference on lipids, held May 7–8, 1957, at the Cleveland Clinic, have just been published (Chemistry of Lipids as Related to Atherosclerosis).

The symposium was the first of its kind in that it brought leading lipid chemists from the fields of biology and medicine in contact with industrial chemists, particularly those concerned with the processing of foodstuffs because of their interest in the possible role of diet in atherogenesis. The symposium and its subsequent publication were supported by the National Heart Institute to facilitate synthesis and dissemination of current knowledge in this rapidly expanding field of biochemistry and also to stimulate further research on the relation of lipids to atherogenesis and attendant coronary artery disease.

The volume of proceedings contains 18 papers on the chemistry, distribution, metabolism, and nutritional aspects of lipids, together with the discussion that followed each presentation. These give primary emphasis to basic biological and physical properties of lipids and techniques for their study. A particularly noteworth technological contribution is the discussion on gas chromatography by Dr. A. T. James of England, who pioneered the development of this important method for lipid analysis, one now under intensive investigation in this country.

One hundred and nine scientists from the United States, Canada, and several European nations participated in the conference. They represented biological and medical research institutions; chemical, pharmaceutical, and food-processing industries; the National Heart Institute; and certain laboratories in the Department of Agriculture.

NHI findings indicate that platelets function in binding amines

Mounting evidence of affinities of serotonin and other physiologically important amines for blood platelets suggest that these tiny colorless corpuscles have an important function in binding circulating amines, or nitrogen-containing chemicals.

Serotonin, an amine which is evidently involved in the normal performance of many of the body's automatic (autonomic nervous system) functions (blood pressure, heart rate, gastro-intestinal motility, emotional states, etc.), is known to circulate almost entirely in blood platelets. Pointing this out in Archives of Biochemistry and Biophysics, Drs. Herbert Weissbach, Donald Bogdanski, and Sidney Udenfriend of the National Heart Institute present experimental evidence that norepinephrine and histamine as well as serotonin are taken up by the platelets when solutions of the compounds are infused into the veins of dogs.

The serotonin infusions raised the levels of this amine in the platelets as much as ten times normal, and high levels persisted in the platelets for several days after the infusions.

Although dog platelets normally contain no histamine and comparatively little norepinephrine, they also took up these amines, both in the circulation system of the dogs following infusion and in special preparations of isolated platelets.

"The ability of platelets to bind a variety of amines in vivo as well as in vitro suggests that this may represent an important physiologic function of the platelets," the investigators summarized. One of the most interesting possibilities raised by these findings is that platelets serve to take up these potent substances as they are liberated into the blood and hold them to be released slowly for metabolism.

This possibility, which is being explored in the continuing research, might account for the hitherto unexplained concentrations of amines such as serotonin which have been known for some years to occur in platelets.

INCREASING NEED FOR SURGICAL SUITE

Dr. WATT. If I may, I would like to say one thing about the surgical suite at just this moment.

I would like to say that this need is even more acute now than it has been since these complicated operations are being developed, and I certainly hope that it can go ahead and as rapidly as possible, because it is a very important need.

PROGRAM FOR AGING

One other point I did not mention earlier, Senator Hill, if I may add it at this moment, sir, is on the question of the development of of a program in aging.

This will be submitted for the record, if it is all right with you, sir, on the development of the Einstein grant, and work in Baltimore and other such work.

Senator HILL. Will you be sure to submit all of that fully for the record?

Dr. WATT. Yes, sir.

Senator HILL. Is there anything you want to add to that, Dr. Shannon?

Dr. SHANNON. No, sir.

I do think it would be effective for Dr. Watt to submit the aging program for the record because, although I mentioned it in my testimony, it is not described adequately in any one of the appropriations.

Senator HILL. If you will do that that will be fine, Doctor.

Dr. WATT. Yes, sir.

(The statement referred to follows:)

BACKGROUND STATEMENT ON RESEARCH ON AGING

The National Institutes of Health, both in the Director's office and in the several Institutes, has continued to stress the desirability of expanding research into all of the health-related aspects of aging. Since aging is a universal phenomenon affecting all living things, and since it concerns all aspects of living, research problems in aging range all the way from basic biological studies to studies of what the aging person thinks about himself and his relationship to his family and friends, his job, and society at large.

Some studies are directed specifically at the aging process. Others are directed both at aging and at related health or biological problems. Still others, of which cancer studies are an example, are not directed at aging as such, but have an indirect bearing on aging since cancer is characteristically a disease of later life. In discussing research in aging, therefore, we recognize that some research is aimed specifically at problems of aging, while other research projects are concerned only partially or indirectly with these problems.

The NIH activities in aging may therefore be divided into three groups: First, NIH staff activities; second, intramural and extramural research bearing directly on aging; and third, intramural and extramural research bearing partially or indirectly on aging.

NIH STAFF ACTIVITIES

The National Institutes of Health, as an expression of its determination to stimulate increased activity in research in aging, established the Center for Aging Research in the fall of 1956. The Center for Aging Research has the following objectives and functions: (1) to assist and stimulate research investigations in the field of aging at universities, university medical schools, and other research organizations, including research hospitals, (2) to promote the coordination of intramural research programs in aging, (3) to provide liaison between the National Institutes of Health and other organizations conducting research in this field, (4) to collect and disseminate scientific data related to research on aging, and (5) to foster the training of additional investigators to carry on research in this field. As part of the expansion of outside research, it was proposed that a few university-centered centers for research in aging be established. A grant from the National Institutes of Health for partial support of one of these centers was awarded to Duke University during the Summer of 1957. Other universities are interested in similar projects, and it is probable that 1 or 2 such centers will be developed during the coming fiscal year.

A second staff activity having to do with gerontological research is focused in the Professional Services Branch of the National Institute of Mental Health, which concerns itself with program development in various areas of mental health. One of the responsibilities of this group is the formulation of an approach whereby this Institute may make contributions to the field of gerontology. This program has been active for a number of years in a project having to do with a community survey involving psychological and sociological factors in aging and chronic disease in a midwestern city. Recently it has been instrumental in obtaining a continuation of an important study of a group of men over 60 years of age, divided approximately equally between retired and nonretired individuals, with respect to psychological adjustment to retirement. The Professional Services Branch of the National Institute of Mental Health is currently developing a project with a group of nongovernmental research workers for the study of

first admissions to a mental hospital of patients over 65 years of age to determine if possible what procedures are feasible as an alternative to hospitalization.

The Division of Research Grants is essential to our activities as a staff function for the processing of research grant applications having to do with aging as well as all other research grants. At the present time, to insure the best possible review of research grant applications dealing with research involving a number of disciplines, an ad hoc committee has been established as a special study section to consider multidisciplinary research projects, in order to ensure full coverage of all of its aspects.

RESEARCH BEARING DIRECTLY ON AGING

Intramural programs

Much research has been done and is being done at the National Institutes of Health in an effort to characterize the process of aging in living organisms.

There are two intramural programs that are wholly concerned with problems of aging. One of these, operated by the National Heart Institute, is located at the Baltimore City hospitals, where laboratory and clinical facilities are available, and where a large number of older patients are available for study. This program has been in continuous operation since 1940. Current research problems undertaken by the Gerontology Branch of the National Heart Institute are organized under five major sections: (1) Biology and cellular physiology of aging, (2) human physiology, (3) human performance, (4) psychological aspects, and (5) geriatrics. At the present time the Gerontology Branch is being expanded, particularly in its program of studying the basic biology of aging, so as to include additional coverage in the fields of experimental embryology, genetics, histology, biochemistry, and cellular physiology.

The second specific research program in aging is conducted by the National Institute of Mental Health at the Clinical Center in Bethesda. This program, designated as the Section on Aging, has been in operation for several years in the Laboratory of Psychology. The goal of the research program is to gain an understanding of the major influences of age changes in the behavior of the individual, and in the function and structure of the nervous system. The Section on Aging has also participated in a study of the human factors in aging, a study which has involved many individual investigators in at least twelve laboratories of the National Institute of Mental Health and the National Institute of Neurological Diseases and Blindness.

In addition to the two specific programs in gerontology that have been mentioned, considerable portions of the intramural research conducted in all of the Institutes are of considerable importance and significance in the field of aging. For example, in the National Cancer Institute, research activities are developed and planned primarily in terms of the disease or disease manifestations being studied rather than the age of the patient involved. However, it is quite obvious that the major portion of the research being conducted in the field of cancer is closely related to the advancing age of our population. In the National Institute of Allergy and Infectious Diseases, there is a study, the objective of which is to study the biochemical changes in energy metabolism associated with biological aging and parasitism. The National Institute of Dental Research and the National Institute of Neurological Diseases and Blindness are both very conscious of the problems of aging and keep in mind ways in which their studies may contribute to an understanding of the aging process. One of the most fertile dental research approaches to the field of aging is the analysis of nutritional data acquired through a careful scrutiny of qualitative factors of diet. Detailed population surveys along this line are being conducted in several areas. In the National Institute of Neurological Diseases and Blindness, a study is being made of the relationship of the nervous system to the heart and blood vessels as related to the problems of aging. Likewise, significant studies are being made on problems of serve regeneration, cataracts, and glaucoma.

The National Institute of Arthritis and Metabolic Diseases has several studies in progress in which the primary interest lies in the life span of erythrocytes and lymphocytes. These studies, in the basic biology of aging have specific interests in age-changes in cellular metabolism, enzyme function, and the effect of age changes on hematopoietin and other recently discovered blood regenerative factors. One of the disease processes closely associated with age changes is osteoarthritis; recently NIAMD investigators have developed techniques for producing this disease in small laboratory animals. In the Clinical Branch of NIAMD osteoporosis of old age is being studied by metabolic balance and isotopic

turnover techniques in relation to the influences of age on mineral storage, adrenal cortical steroids, gonadal steroids, and dietary factors.

Extramural programs

At the present time there are 120 research projects supported by the research grant program which we classify as being directly concerned with aging. These have an annual money value of approximately $2 million.

The National Heart Institute and the National Institute of Mental Health have the major responsibilities in the field of aging. These 2 Institutes support 1 large university-centered center for study in aging, that at Duke University mentioned above. They also are supporting in equal shares the abstracting of gerontological and geriatric articles from the whole world literature in Excerpta Medica. This abstracting service will furnish to investigators throughout the country information on gerontological research here and abroad that has not been hitherto available from any source, domestic or foreign. The National Institute of Mental Health and the National Heart Institute also provide funds for an experimental training grant in the field of social gerontology. The National Heart Institute has made a training grant for the teaching of geriatrics in one medical school on an experimental basis.

The National Cancer Institute supports by way of research grants 11 projects which have as their major objective a study of some aspect of the aging process. These research grants are in the following areas: The pathology occurring in old animals, endocrine changes with progressive age, histological changes with age in normal tissues, and the effect of chronic irradiation as a factor in premature aging.

The National Institute of Neurological Diseases and Blindness has supported during the past year a number of extramural research programs, and has sponsored a symposium at Bethesda limited to consideration of the process of aging in the nervous system. The objectives of this symposium were to establish the present state of knowledge of the process of aging of the nervous system and to seek new guidelines and approaches to future research through the use of animals as well as in the study of human patients.

The National Institute of Arthritis and Metabolic Diseases is supporting 35 projects bearing on aging. Fourteen of these are primarily related to aging, in the fields of endocrinology, metabolism, and supportive tissue studies.

The National Advisory Dental Research Council has recommended that the study of dental aspects should be included in all broad studies of aging supported by the National Institutes of Health.

The Division of Research Grants supports 12 research grants in the field of gerontology. Four of these are especially important: A study of the effect of parental age on longevity of offspring in mice, a study of the effect of chronic radiation in monkeys, a study of experimental rehabilitation of patients in nursing homes, and a rehabilitation survey and demonstration project in Kansas City.

Research bearing partially or indirectly on aging.

Since most of the diseases studied in the research programs of the National Institutes of Health are chronic or degenerative in nature, and since such diseases are of particular significance to older persons, practically all of the research conducted or supported by the NIH could be said to have some indirect relationship to the aging process. Limiting ourselves, however, to the extramural research projects in which the relationship to aging, while indirect or partial, is significant, we find that about 140 projects currently supported can be so classified. These have a total annual money value of $2,250,000, but it is impossible to estimate what portion of this total could properly be related to research in aging.

JANUARY 23, 1958.

AGING

PROGRAM STATEMENT 1957–58

DIVISION OF RESEARCH GRANTS

Our lack of a direct research program limits our activities as compared to Institute programs, to essentially four respects:

1. Insuring the best possible review of research grant applications dealing with research on aging by established study sections, ad hoc committees such as special study sections in multidisciplinary research, and selected individual experts;

2. Providing an official repository for documents dealing with research intentions, progress reports, and reprints of publications reporting research results indexed and processed for retrieval by subject content;

3. Providing fiscal and other related data to illustrate the geographic distribution, magnitude of expenditure, grantee institutions, investigators, etc., for periodic analysis of program status in relation to objectives; and

4. Supporting studies not categorically of interest to Institute programs.

In items 1 and 4 above, we utilize advice derived from the various Institute programs. In items 2 and 3, we provide consultative advice to the Institutes as to feasibility of tabulating and analytical procedures contemplated, as well as of producing special summaries and machine tabulations. While items 1 through 3 are service oriented, they are essential to the coordination of programs, including our own (item 4).

JANUARY 23, 1958.

AGING

PROGRAM STATEMENT 1957–58

NATIONAL CANCER INSTITUTE

Research in the National Cancer Institute, in broad, general terms, is concerned with the etiology, therapy and control of cancer. Research activities are developed and planned primarily in terms of the disease or disease manifestations being studied rather than the age of the patient involved. However, it is quite obvious that the major portion of research being conducted in the field of cancer is closely related to the advancing age of our population. The incidence of new cases of cancer increases very rapidly with increasing age. For example: The incidence rate is about 40 per 100,000 population at age 25, jumps to 475 at age 50, and rises to 1,900 at age 75.

As a result of the progressive increase in the national average life span, larger portions of the population are living into the years when cancer takes its greatest toll. More than half of all cancers are found in people over 50 years of age.

Of the intramural research activities, there is one project which is specifically a study of the process of aging entitled "An Investigation of the Collagenous Connective Tissue" (project NCI–522). The purpose of this project is to elucidate the age changes in collagen and to uncover mechanisms affecting the usual state of the collagen in the body. Other than this project, the plan of the various research projects is directed at factors other than specifically the aging aspect.

FEBRUARY 5, 1958.

AGING

PROGRAM STATEMENT 1957–58

NATIONAL HEART INSTITUTE

The National Heart Institute has, since its establishment in 1948, maintained a broad interest and an active research program in aging. The National Advisory Heart Council has recommended support of research in gerontology based upon a multidisciplinary approach, and has recognized that a large portion of our research is indirectly related to the understanding of the aging process, or extension of the life span of man.

The Gerontology Branch of the National Heart Institute represents one of the oldest laboratories in the country dedicated to the study of gerontology. This laboratory was established in 1940 by the National Institutes of Health at the Baltimore city hospitals under a grant from the Josiah Macy, Jr., Foundation. In July 1941 the support of this laboratory was assumed by the National Institutes of Health. In 1948, with the establishment of the National Heart Institute, the activities of the Gerontology Branch were transferred to this Institute.

The work of the Gerontology Branch is concerned with the identifying and describing of changes in physiological and psychological capacities of aging humans. In general, the work of the Branch is organized under five major sections: (1) Biology and cellular physiology of aging, (2) human physiology, (3) human performance, (4) psychological aspects, and (5) geriatrics. Additional funds which were made available to the Gerontology Branch for fiscal year 1958 are being utilized for the expansion of programs in the basic biology of aging.

At present, additional laboratories are being equipped and scientists from the fields of experimental embryology, genetics, zoology, histology, biochemistry, and celllular physiology are being recruited. In addition, programs are being initiated to investigate the basic biological and biochemical problems of aging. These studies will utilize cells and tissues from a variety of animals.

The Gerontology Branch recognizes that, for the most part, descriptions of age changes are based on the average of values obtained on different subjects at each age level. For a complete understanding of aging it is essential that measurements be made on the same subject as he ages. Such longitudinal studies have been started and observations over 3- to 5-year periods are being made with respect to renal function, resting cardiac output, pulmonary function, and basal metabolism.

In collaboration with the National Institute of Mental Health, a Psychology Unit has been established in the Gerontology Branch. During the year, two additional professional psychologists have been recruited and research programs have been formulated to study age changes in memory, verbal function, and the psychological aspects of attention and motivation. A number of exploratory studies for the standardization of techniques to determine age differences in the meaning of words has been carried out.

Extramural research

The National Heart Institute has made grants for research in aging to a number of universities, medical centers, and research hospitals throughout the country. In fiscal year 1957 grants directly related to aging amounted to approximately $583,000. During fiscal year 1958, 29 new projects related to the aging process have been supported. These research programs encompass a wide area of research including the partial support of the first university-centered center for aging research at Duke University.

One of the more recent grants awarded by the National Heart Institute has been to the American Institute of Biological Sciences. This grant to AIBS, with an equivalent grant from the Atomic Energy Commission, will be used for a series of conferences on the relationship between radiation injury and the aging process. These conferences are expected to make a significant contribution to our knowledge of the effects of radiation.

Many studies supported by the National Heart Institute are indirectly related to aging. These include such studies as the incidence of atherosclerosis in an aging population, the pathology of atherosclerosis, the incidence of coronary heart disease in an aging population, and high blood pressure in an aging population.

The National Heart Institute will continue to encourage and stimulate research among its own research personnel, and, on recommendation of the National Advisory Heart Council, stimulate and encourage expanded research at university centers as well as to increase the number of individual research projects primarily aimed at study of the process of aging.

JANUARY 24, 1958.

AGING

PROGRAM STATEMENT 1957–58

NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

This Institute has only one intramural project specifically devoted to the problem of aging. This is being conducted by the Physiology Section in the Laboratory of Tropical Diseases. The objective is to study the biochemical changes in energy metabolism associated with biological aging and parasitism. These investigations demonstrated that the level of oxidative phosphorylation declines markedly in mitochondria isolated from liver cells of senescent rats. There is a definite difference in the ability of isolated liver cell mitochondria of different species of animals to retain their capacity for oxidative phosphorylation. Future studies of this very interesting basic observation will employ isotopic tracer techniques. It is proposed to extend these studies to include parasitized animals in order to ascertain the effect of parasitism on biochemical energetics.

JANUARY 28, 1958.

AGING

PROGRAM STATEMENT 1957–58

NATIONAL INSTITUTE OF ARTHRITIS AND METABOLIC DISEASES

The National Institute of Arthritis and Metabolic Diseases and its antecedent laboratories in the Experimental Biology and Medicine Institute have maintained a broad interest in the problems of aging. This interest has stemmed from the Institute's fundamental and extensive concern with greater understanding of basic metabolic processes. It has been assumed that changes in certain or even many metabolic processes occur with aging and may be responsible for significant features of the aging process.

Applying the broad scale of measurement which characterizes as aging all changes in life processes occurring from conception or the beginning of life, it would be possible to classify as related to gerontology a tremendous proportion of the projects carried on intramurally in NIAMD or supported extramurally by this Institute. Applying a more limited scale, however, and counting only those studies which are inquiring directly into the aging process or defining various characteristics of the aging organism, only a modest number of projects can be so cataloged. By the inclusion of studies bearing less immediately on gerontological interest, several additional investigations can be listed.

Both direct and indirect gerontological studies sponsored by NIAMD involve mainly the supporting structures of complex organisms, connective tissue, and tissues of the joints and skeleton. Next in number are studies involving the hematological system and nutrition, due to NIAMD's long categorical interest in these fields.

Following is a summary of the principal areas of gerontological investigation supported by NIAMD, according to the classification made by the Center for Aging Research in May 1957:

Intramural research

Among the NIAMD studies carried on at Bethesda directly related to aging processes are two in hematology. Under investigation are the features of aging in red blood cells, their permeability characteristics and general enzymatic constitution; it has been found that certain key enzymes in the essential carbohydrate metabolism of erythrocytes lose their effectiveness toward the end of a cell's life, and this enzymatic failure may well be an important event leading to final breakup of the cell. Another hematological study is concerned with the turnover and life span of erythrocytes and lymphocytes and the effect thereon of hematopoietin and other recently discovered blood regeneration factors.

One of the diseases closely associated with aging is osteoarthritis. The investigation of this and other human chronic rheumatic conditions has been considerably hampered in the past by the lack of a reproducible similar condition in small laboratory mammals. Considerable importance, therefore, is attached to the development by NIAMD investigators of a spontaneous osteoarthritis in rats and mice. Obesity-producing high fat diets have resulted in production of consistent osteoarthritis in rats, but not consistently in mice. In the latter, the arthritis has been shown to be dependent on a genetic factor.

A variety of problems are under study in projects secondarily related to gerontology. The Laboratory of Nutrition and Endocrinology, in its studies of experimental obesity in animals, is determining the alterations in longevity and in various biochemical and physiological functions brought about by the development of obesity. In the Laboratory of Physical Biology, the effects of hypoxia and simulated high altitude are being noted on many physiological processes, particularly on the blood and circulation, and the life span of erythrocytes is being measured in the animals and birds under study. In the Laboratory of Chemistry, the metabolites and antimetabolities of amino acids are under investigation in order to test the hypothesis that the process of aging of fibrous tissue proteins may be due to loss of enzymatic specificity in the biogenesis of certain amino acids or possibly to certain abnormal oxidation reactions. In the Clinical Branch

of Metabolic Diseases, the demineralizing disorder common in old age, osteoporosis, is being studied by metabolic balance and isotopic turnover techniques, with particular attention to the relative influences on mineral storage and loss of adrenal cortical steroids, gonadal steroids, and dietary levels of minerals.

Extramural research

By means of research grants, the National Institute of Arthritis and Metabolic Diseases is supporting in various universities and medical centers throughout the country a total of 35 projects concerned or associated with gerontology. Fourteen of these are primarily related and deal with problems in four areas: connective and articular tissues, the skeleton, endocrine hormones, and nutrition.

Connective tissue studies are concerned with histochemical exploration and identification of complex carbohydrate alterations in connective tissue ground substance, with changes in chemical structure of collagen with aging, and with mechanisms of collagen fibril formation and their change with aging; these studies will be valuable not only because of the importance of connective tissues for support of organs and tissue structures throughout the body, but also because of the prominent role these tissues play in disease and wound healing. With particular ultimate importance to increased knowledge in arthritis, basic studies are being undertaken to characterize the cytochemical, histochemical, structural, and radiological changes with age in normal human articular cartilage and closely adjacent structures.

NIAMD investigations concerned with gerontological features of the skeleton include an ambitious radiologic survey of the skeletons of many men and women from early adulthood to beginning senescence, in an effort to determine whether changes attributable to aging are radiographically visible and, if so, whether they appear in any regular sequence. Fractures of the femoral neck, a common injury in the aged, are the subject of a study of factors contributing to the final result in treatment of this injury; it is hoped that significant improvement may be obtained in the initial treatment and a lower incidence of poor final results in these cases.

Studies of the endocrinology of aging have been supported by NIAMD which have shown a gradual decrease with age in production, metabolism and volume of distribution of the adrenal cortical steroid, cortisol, and a reduced capacity of the adrenal glands in the aged to produce adrenal steroids in response to stress; a test for more precise evaluation of testicular function or male hormone production which can be applied to gerontological studies is being developed. Another group of scientists is investigating the influence of thyroid and pituitary hormones on cartilage cells and intercellular substance and has evaluated the significance of age in susceptibility of these tissues to hormonal influences.

Nutritional studies include a histopathologic study of vascular, articular, and skeletal tissues of small animals placed on diets of varied composition and maintained on them for most of their life span, and a dietary survey in a population of older people for correlation of physical status and nutritional factors. In addition, detailed analyses of the fat distribution and composition of fat-free tissues are being made in guinea pigs from birth through old age for information on the influence of age on body tissue composition.

Projects secondarily related to gerontology being supported by NIAMD number 21. The largest number of this group, six, are for basic studies of connective tissue metabolism, and include measurement of configuration of collagen and gelatin molecules by X-ray diffraction and polarimetry, response during aging of the hexosamine-collagen ratio in skin and bone, turnover rates of amino acids, effects of ascorbic acid and sulfur compounds to wound healing in young and aged animals, histochemical characterization of muscle and articular cartilage in immobilization, and study of a newly discovered compound which inhibits collagen and fibroblast formation. Directly related to arthritis is a study of the metabolism and excretion of salicylate and a population study of the prevalence of arthritis.

In NIAMD extramural studies of diabetes, the toxicity is being determined in animals of the new oral antidiabetic drugs, and various pathologic investigations are attempting to deal with the question, does diabetes accelerate the vascular changes of the normal aging process? Several important subjects are under scrutiny which will lead to greater knowledge of the skeleton and its metabolic processes: calcium metabolism in osteoporosis, bone sodium, and methods of measuring bone density. Other studies sponsored by NIAMD involve a number of widely varying aspects of nutrition, hematology, and endocrinology.

It is anticipated that NIAMD will continue to encourage and support investigations of the aging process in a number of aspects, but particularly in the areas

noted. Sponsorship of gerontology by NIAMD may be expected to be broadened gradually in proportion to the extent to which increased extramural funds are made available.

JANUARY 24, 1958.

AGING

PROGRAM STATEMENT 1957–58

NATIONAL INSTITUTE OF DENTAL RESEARCH

Extramural research grants

Recognizing the ever-increasing proportion of elderly inhabitants among the Nation's population, the National Advisory Dental Research Council has recommended that in all broad studies of aging, supported by NIH funds, the inclusion of dental aspects should be seriously considered. In the simplest terms, it is apparent that deterioration of calcified or soft tissue within the oral cavity causes an impaired mastication which, in turn, causes severe additional load on the gastrointestinal processes during digestion, and thus a reduced nutritional level for the entire biological system.

Directly in support of research grants for such purposes, 5 projects, in the amount of $98,000 are underway. An additional 17 projects, closely associated with the chronic oral conditions of aging, are being supported in the amount of $221,000.

Since the biological integrity of tissues in man depends on an energy source provided by a vascular system, a program is underway to determine the organization, function, and reasons for deterioration of the blood supply to the oral structures. Recent advances in histochemical technics and biochemical assay methods for quantitating the degree of calcification serve to assist the research teams now investigating this general problem.

With any interruption of the energy supply provided by vascular flow, a bacterial infection will usually develop. One research group has enumerated some of these microbial organisms which individually and/or collectively produce an array of substances capable of destroying collagenous tissue as well as other vital structures that comprise the anchorage and foundation of the teeth. How these toxic products of bacterial metabolism may adversely affect the general body metabolism as individual age increases is not known.

While it is well accepted that chronic degeneration of the supporting tissues is responsible for 75 percent of the loss of teeth in individuals past 35 years of age, the reasons for such degeneration are based primarily on statistical evidence. Detailed population surveys are therefore being conducted in several large metropolitan areas, in rural communities, in specific racial groups, and in groups showing manifestations of disease attributed to hereditary factors associated with intermarriage. It is hoped that such studies will soon shed additional light on the causes of tooth mortality in the older age brackets.

One of the more fertile dental research approaches to the field of aging is nutritional data acquired through a careful scrutiny of qualitative factors of diet. Although the apparent lack of essential dietary ingredients in many of today's processed foods is undoubtedly a contributory factor in hastening the deterioration of the teeth and their supporting tissues, several dental research teams are concentrating their attack on the importance of mineral salts as activators of biological enzyme systems. Inquiry now encompasses an investigation of the possible importance of strontium, molybdenum, boron, cadmium, and lithium in maintaining the requisite metabolic energy levels in oral tissues.

The annual volume of prosthetic appliances, together with the need for continual replacement, indicates the importance of developing improved principles of design as well as better materials. The elderly individual who has lost several or all of his teeth is particularly aware of the oral pain resulting from ill-fitting appliances. Eleven groups of investigators are currently supported in an effort to provide superior materials which will maintain size and shape when fabricated into prosthetic appliances. Although materials possessing low coefficients of expansion have been found, it requires but a few hundredths of a millimeter change in size for a well-fitting denture to become an ill-fitting one. In addition, considerable differences of opinion continue to be experienced regarding the most effective design of appliances.

Correlation of endocrine gland function with changes in aging oral tissues is also a somewhat neglected area of investigation. It is gratifying to report

that several research teams are now attempting to provide data which may associate the quantities of hypophyseal, adrenocortical, and thyroid hormone with the physiological viability of the oral tissues, particularly in aged individuals. Significantly, age changes in the mouth are apparently manifested at a more rapid rate than in other tissues of the body.

Intramural research

In the intramural program considerable attention is being given to the compilation of a descriptive and determinative epidemiology of the group of disease entities commonly called pyorrhea. A companion study is in progress to determine whether periodontal disease is a manifestation of general systemic conditions or due primarily to aging. A third field study of a triracial isolate group in southern Maryland has as one of its major objectives the assessment of the effect of inbreeding on not only reproductive capacity and the process of natural selection, but also on longevity. The wide interest and promise held for this genetic program is evidenced by the collaboration of scientists from almost all of the categorical Institutes of the NIH. Since periodontal diseases affect about 70 percent of all persons over 50 years of age, the data being assembled from these projects will probably be of great value.

A number of experimental investigations are also concerned with the general field of aging. In one such study on rats, the influence of aging is being evaluated in relation to bacterial, dietary, and other factors which are unquestionably important in the development of oral diseases. With particular respect to periodontal diseases, another projects is utilizing histochemical technics to determine the chemical composition and enzyme activity of normal, diseased, and aged connective tissue. This study provides an example of the importance of applying newer research tools to dental investigation. In this regard, considerable promise is held for information that might be forthcoming from electron microscopy, electron diffraction, and X-ray microscopy, particularly as related to connective tissue and the calcification processes in the aged.

Since it is estimated that by 1975 one-half of the Nation's labor force will be over 40 years of age, the need for research on the many problems associated with aging oral tissues appears well established.

FEBRUARY 6, 1958.

AGING

PROGRAM STATEMENT 1957–58

NATIONAL INSTITUTE OF MENTAL HEALTH

Mental health of the aged is one of the public health problems which is receiving increased attention by scientific and professional groups in this country. The National Institute of Mental Health has stimulated and fostered the development of research through its programs of predoctoral, postdoctoral, special fellowships, and research grants. In addition, the National Institute of Mental Health itself conducts research in aging in several laboratories, although the primary focus on this problem is in the Section on Aging in the Laboratory of Psychology.

In 1951 the National Institute of Mental Health established a Section on Aging within the Laboratory of Psychology. The research program of the Section is organized into three operating units: (1) the unit on anatomy and histochemistry is studying microscopic changes in cells of the nervous system, (2) the unit on biochemistry and physiology is concerned with the biological properties of the aging nervous system, (3) the unit on psychology is studying behavioral changes in age in both humans and rats, and (4) a coordinated study of human aging. The purpose of the Section on Aging is to conduct investigations of the factors governing age changes in behavior and the function and structure of the nervous system. The goal of the research program is to gain an understanding of the major influences on age changes in behavior of the individual. This goal requires a joint effort of investigators from several psychological and biological sciences. The present staff of the Section on Aging has representatives from psychology, physiology, biochemistry, anatomy, and medicine.

The Section on Aging has continued to act as a coordination center of the research program on human aging in the National Institute of Mental Health.

This is a program in which several laboratories have participated, and in one phase of which the National Institute of Neurological Diseases and Blindness cooperated. Members of the staff are now actively developing high-speed computer methods to intercorrelate the many variables from different laboratories concerning changes found in the normally aging individuals.

Several members of the Section on Aging have undertaken as one of its major obligations the organization of material on aging and behavior, and the function and structure of the aging nervous system, for a handbook on aging. The Chief of the Section on Aging is editing the volume.

The Professional Services Branch of the National Institute of Mental Health has an important function in the field of program planning, program development, the administration of special grants, budget review, specialized assignments with respect to program problems faced by the Institute, and the provision of consultation within the Institute to other governmental and nongovernmental groups. The major activity of the Branch continues to be research and development in the program areas and problems. It is recognized by NIMH that problems in aging are one of the areas in which special programs are in need of development.

In line with the above thinking, a major effort has been the development of a study of "Psychological and Social Factors in Successful Aging," being carried on in Kansas City through the University of Chicago's committee on human development. A panel of people between the ages of 50 and 70 have been formed and four waves of intensive interviews have been carried out to date. Special studies have been and will be done on other groups, including a group of old people, and eventually a large sample will be drawn to check some of the hypotheses developed in the intensive study.

A special grant to the University of California, Institute of Industrial Relations, was recently approved to complete a study of social and psychological aspects of retirement in groups of working class men, half retired and half about to be retired. Close liaison is being developed between this study and the Kansas City project described above.

At the present time the Professional Services Branch is involved in the development of an intensive study of first admissions to mental hospitals of people over the age of 60. The objective of this proposal is to determine, if possible, what procedures are feasible as an alternative to hospitalization.

The extramural research grant program of the National Institute of Mental Health supports 21 research grants having to do with research in aging at approximately $680,000, and 2 training grants of approximately $100,000, for the fiscal year 1958. Research support to nongovernmental investigators in universities, research hospitals, and research institutions can be divided into four major areas: (1) a study of the effect of aging upon the central nervous system, (2) psychiatric rehabilitation of older persons, (3) determinants of retirement and criteria of aging, and (4) studies of the normal psychological aging process.

The National Institute of Mental Health, with the National Heart Institute, has made a grant to Duke University for the establishment of a major university-sited center for the study of aging. This project is a multidisciplinary approach to the study of the aging process, involving many of the departments of the Duke University. Similarly, a cooperative grant between the National Institute of Mental Health and the National Heart Institute has been made to Excerpta Medica for abstracting the gerontological literature from approximately 2,000 journals. This abstracting service in gerontology covers the biological, medical, sociological, and psychological literature.

The National Institute of Mental Health will continue to encourage and stimulate research among its own research personnel, and on recommendation of the National Advisory Mental Health Council, stimulate and encourage expanded research at university centers as well as to increase the number of individual research projects primarily aimed at the study of the process of aging.

JANUARY 13, 1958.

AGING

PROGRAM STATEMENT 1957–58

NATIONAL INSTITUTE OF NEUROLOGICAL DISEASES AND BLINDNESS

In a prepared statement submitted to the Subcommittee on Appropriations, United States Senate, in 1957, Dr. Augustus S. Rose (professor of neurology, University of California), pointed out that the capacity of a man to adjust to his advancing years depends upon the integrity of the nervous system, especially

in relation to the critical functions of intelligence, memory, speech, and movement. He emphasized the lack of substance of research programs in the problem of aging unless they included a study of the changes in the brain and of the spinal cord which accompany the process of aging. Dr. Rose offered a substitution for the adage that a man is as old as his arteries—saying, rather, that he is as old as the function of his brain and spinal cord. The definite relationship of the nervous system to the heart and blood vessels was cited as an example of the importance of the nervous system. Certainly this example was timely since cerebral vascular disorders and disorders of the heart and blood vessels are other major national health problems and are undivorced from the problem of aging.

It has been evident in regard to a great many neurological problems in which research was considered to be in its infancy that the basic philosophy of research proclaimed and built upon by the National Institute of Neurological Diseases and Blindness, since its inception, nevertheless has insured concrete and consistent progress pertinent to such problems. This certainly has been the case in regard to research in aging. From the beginning, the basic philosophy of the National Institute of Neurological Diseases and Blindness regarded the knowledge and understanding of the underlying structure and function of the brain and nervous system as absolutely essential before sensible progress could be made toward understanding deviations from the normal functions—such as many presume aging to be. The general plan in the beginning, therefore, was to sponsor fundamental research where knowledge was lacking or incomplete, as well as clinical research. The consistency with which this Institute has followed the basic philosophy, not only was rewarding when steps were being taken to formalize a research program on aging, but in fact, is evidenced in the type of research currently pursued in aging by this Institute.

Officially it has been stated that the primary focus of the National Institutes of Health research programs in aging is centered on the nature of the process of aging, rather than on the broad spectrum of problems faced by older members of the population, and that the major effort will be in the extramural programs rather than in the intramural programs. In regard to the former, however, the significant contributions the National Institute of Neurological Diseases and Blindness is making to research both on the process of aging and on neurological problems particularly, although not exclusively, associated with aging should not be discounted in favor of one another. Again, the significant relationship of the nervous system to the heart and blood vessels, cited earlier in this paper, is recognition of the value of this Institute's program of research on cerebral vascular disease in relation to problems of aging. Likewise, significant strides in the research attack on problems such as nerve regeneration, cataracts, and glaucoma should not be discounted in evaluating progress in regard to aging, especially in view of the concept of aging, advanced by some groups, in which aging is associated with pathological assault. In terms of other concepts of aging, the search for knowledge of the normal growth and development of the nervous system and of the body seems eaqually important and valuable in the research endeavor of this Institute in regard to aging. Nevertheless, for purposes of this analysis, insofar as is possible, the current research endeavors will be discussed (later) according to projects (1) related to the process of aging or specifically designed to examine the problem in which aging is considered a major factor, (2) problems particularly associated with aging, and (3) basic studies of the nervous system and the body, including growth and developmental aspects.

Despite an inclination to view the research attack on aging being made by the National Institute of Neurological Diseases and Blindness according to such a broad frame of reference, on January 30, 31, and February 1, 1957, the National Advisory Neurological Diseases and Blindness Council sponsored a symposium at Bethesda, Md., limited to considerations of the Process of Aging in the Nervous System. The objectives of the symposium were established to summarize the present state of knowledge of the process of aging and to seek new guidelines and approaches for future research, both on the basis of collaborative effort and on the basis of individual creativity, which so often produces the answer in spite of an aggregate effort. The conferees at this symposium were not concerned particularly with the many unresolved neurological disorders of the aged, regardless of their heavy toll in disability and death, but rather, were oriented more toward the biological changes taking place in the nervous system during the passage of time.

As Dr. Pearce Bailey, Director of this Institute, pointed out in his opening remarks to the conferees, very little is known about what normally takes place in the brain as it matures and grows old. He went on to point out that this Institute considers the acquisition of knowledge of the process of aging in the nervous system necessary to provide a better basis for understanding the old individual, to say nothing of the ultimate goal of increasing man's range for critical adjustment during later life. Dr. Bailey suggested that much of the current information about the process of aging in the nervous system may have been accumulated by incidental observation rather than deliberately sought, and added that perhaps the nature of the process should be explored now much more thoroughly than it has been in the past.

Discussions at the symposium centered primarily around structural changes in the nervous system, regeneration, cellular physiology, histochemistry, biochemistry, metabolism, circulation of the brain, and clinical neuropathology, as well as neurologic and psychologic functions as related to the process of aging.

Also, it was pointed out that for further studies of the process of aging, it is desirable to establish colonies of young and old animals so that those investigators wishing to study changes of a progressive nature can be assured of animals of known age and health for study. Institute-sponsored laboratories now are developing colonies of such guinea pigs and rats. These animals are being used for the demonstration of changes in chemistry and structure taking place throughout the lifetime of the animal.

The proceedings of this symposium are being edited by Dr. James E. Birren, Henry A. Imus, and William F. Windle for publication, as a monograph, by Charles C. Thomas, publisher. As is usually the result of such symposia, it is anticipated that the stimulation and interchange of scientific thought at the conference, compounded by stimulation of others who may review the proceedings, will result in attracting more scientists to this problem and will expedite the fulfillment of the originally stated objectives of the symposium.

Extramural research grants

Through the extramural research grants program, 10 studies in various universities are being conducted which relate to the process of aging or are designed specifically to examine a problem in which aging is considered as a major influencing factor. These investigations range from histochemical and biochemical studies of the nervous system with reference to aging, including studies of lipids of the brain in aging in nervous disease; nerve-connective tissue relationships and the process of aging; characteristics of spinal reflexes as related to aging; and effects of age on the functional regeneration of motor nerves; to studies of cerebral vascular disease in the aged; auditory impairments of old age; clinical and pathological studies of the eye in old age; and studies of inherited presenile dementia.

In addition, 53 studies are being conducted in universities and hospitals on problems particularly associated with aging.

Seven of these are concerned with glaucoma, a blinding disorder to which older people especially are susceptible. Investigations encompass studies of clinical aspects of glaucoma; ocular pressure (believed to be a major etiological factor) and pressure regulating mechanisms; intraocular fluid dynamics, including aqueous veins; effects of vasodilator and vasoconstrictor drugs on intraocular circulation; and studies of emotional factors in patients with glaucoma.

Nine studies are concerned with cataract, another blinding disorder to which older people especially are susceptible. There are many forms of cataract, some present at birth, others developing as a result of systemic disease, or other local disease in the eye, but the greatest number of cataracts are considered an evidence of degenerative processes in the eye or an evidence of local senility. Observations are being made on the ocular lens (the opacity of which constitutes the cataract) in health and disease. Particular attention is being paid to studies of cations and hydration of the cornea and lens; lens metabolism and the effect of pH on metabolism in vitro; immunological influences on the lens; lens proteins; lens opacities following injection of dinitrophenol; inductions systems in lens development and regeneration; as well as clinical observations of cataracts in man and animals. In the past, attempts to elucidate the etiology of cataract have been restricted largely to chemical or physical analysis of the lens after cataract has formed. Significant in many of these studies, however, is consideration of cataract as a function of growth and aging of the lens.

The greatest number of extramural research projects and field investigations (37) on problems particularly associated with aging are concerned with cerebral vascular disorders.

Because of the inadequacy of present methods of diagnosis, treatment, and rehabilitation of patients with cerebral vascular disease, a large and comprehensive cooperative program of clinical study of aneurysms and acute subarachnoid hemorrhage is being conducted. In addition to studies of the causal factors related to these disorders, an evaluation is being made of various surgical and nonsurgical treatments in terms of the mechanism of action and in terms of the clinical results over long periods of time; 12 medical centers are participating in this program.

A smaller program, involving six medical centers, is evaluating the effectiveness of anticoagulant drugs in preventing strokes.

These two cooperative research attacks were outgrowths of conferences on cerebral vascular disease, held as early as September 19 (Bethesda) and December 7 and 8, 1955 (New York), and sponsored by the National Advisory Neurological Diseases and Blindness Council.

In addition, studies are being made by individual investigators in universities and hospitals on the anatomy, biochemistry, histology, physiology, and pathology of the nervous system and the vascular systems. Angiography in the study of cerebral vascular disease is being explored; as are the hemodynamic events in cerebral vascular episodes; the permeability of the cerebral vascular system (i. e. the exchange between blood, cerebral spinal fluid, and the brain—referred to as the blood brain barrier); as well as the metabolism of amino acids and the blood brain barrier. Studies of experimental cerebral vascular disorders, especially embolism; as well as clinical and pathological studies of naturally occurring cerebral vascular diseases in man, including cerebral thrombosis, embolism, brain edema, and cerebral infarction, are being made to learn the etiologies and natural courses of the disorders, and to develop more effective preventive, therapeutic, and rehabilitative techniques. Correlations are being attempted of higher brain-functioning and cerebral vascular disease. Also, performance tests are being made in patients with cerebral disease.

The large program of basic research on the nervous system being supported is essential to the attack on the problem of aging as well as neurological problems. However, special mention should be made of certain studies; 12 investigations are being conducted on growth and development, from the development of the early neural tube to later life. Many aspects of the developmental process and factors influencing this process are being analyzed, especially the developmental anatomy (including differentiation), chemistry and microchemistry (including body fluid formation, as well as nucleoprotein in developing nerve cells), and physiology of the nervous system. Studies are being made of the growth and development of special organs such as the eye and visual pathway (including the role of vitamin E, and the metabolic and functional development of the retina).

Another aspect of the program provides for epidemiological surveys of neurologic and sensory disorders. Not only is it anticipated that these studies will reveal disorders to which the aged may appear particularly susceptible, but in pursuing etiological factors in the disorders, the significance of aging eventually may be revealed.

Intramural research

In the intramural program, one project is related to the process of aging in the nervous system. Another is designed to examine, through the use of electroencephalography, the cerebral blood flow in old age.

Much of the effort of the intramural team is devoted to research related to problems particularly associated with aging.

Five studies are concerned with glaucoma, in which the central nervous system control of intraocular pressure is under investigation. Studies of the effects of muscle relaxants on intraocular pressure and extraocular striate muscles, as well as the pharmacodynamics of various agents affecting intraocular pressure. Also, one study is concerned with the innervation of the anterior chamber angle. A pilot study on the epidemiology of glaucoma in a restricted community also is underway.

Seven projects are designed to study the problem of cataracts. Some are concerned with the chemistry of the lens, especially proteins and nucleic acids. Others are examining the structure of the lens, and its epithelium, as well as

the corneal cells, the ciliary body, and the optic nerve. Experimental cataract, produced through ionizing radiations, diet, and drugs, are being explored. One study is concerned with the chemistry of alloxan.

Two studies on cerebral vascular disease are under way. One deals with the blood brain barrier in brain injury produced by cold, whereas the other is examining factors involved in the formation of cerebral hemorrhages.

As in the extramural program, a large program of basic research on the nervous system is being conducted which is essential to the attack on aging as well as other neurological problems. But for purposes of this analysis, only 5 will be mentioned; 2 are concerned with regeneration in the central and peripheral nervous systems; 1 is studying the vascular supply of the spinal cord; the other 2 are concerned with the epidemiology of neurological and sensory disorders.

It is unfortunate that a serious problem which so long has awaited due recognition cannot be resolved easily and quickly once proper attentions have been focussed upon it, or once the financial support has been made available. But at least, in the instance of neurological aspects of aging, the doors have been unlocked, some of the barriers are tumbling, and what may seem like preliminary basic courses of action to some will be recognized by those closer to the problems as tremendous strides, indeed.

Senator HILL. You do feel that the need for the surgical facilities is even more compelling now than it was 2 years ago.

Dr. WATT. Yes, sir.

Senator HILL. Thank you very much, Doctor, for a most interesting and informative statement. We certainly appreciate it. Thank you.

DENTAL HEALTH ACTIVITIES

STATEMENT OF DR. JOHN W. KNUTSON, CHIEF DENTAL OFFICER, PUBLIC HEALTH SERVICE; ACCOMPANIED BY DR. FRANCIS A. ARNOLD, JR., DIRECTOR, NATIONAL INSTITUTE OF DENTAL RESEARCH; ALBERT F. SIEPERT, EXECUTIVE OFFICER, NIH; AND JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

"Dental Health Activities

"[Dental health activities:] For expenses not otherwise provided for, necessary to enable the Surgeon General to carry out the purposes of the Act with respect to dental diseases and conditions, [$6,430,000] *$6,293,000.*"

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate	$6,430,000	$6,293,000	$6,543,000
Deductions:			
Comparative transfer to "General research and services, National Institutes of Health, Public Health Service"	−127,000	0	0
Unobligated balance, estimated savings	−1,000	0	0
Total obligations	6,302,000	6,293,000	6,543,000

Obligations by activities

Description	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Grants:						
(a) Research projects		$2,825,000		$2,825,000		$2,971,000
(b) Research fellowships		423,000		423,000		423,000
(c) Training		450,000		450,000		450,000
2. Direct operations:						
(a) Research	104	1,228,000	104	1,223,000	111	1,323,000
(b) Review and approval of grants	7	98,000	7	96,000	8	100,000
(c) Professional and technical assistance	91	911,000	91	911,000	91	911,000
(d) Coordination and development of dental resources	30	301,000	30	301,000	30	301,000
(e) Administration	11	66,000	11	64,000	11	64,000
Total obligations	243	6,302,000	243	6,293,000	251	6,543,000

Obligations by objects

Object classification	1958 appropriation	1959 budget estimate	1959 House allowance
Total number of permanent positions	243	243	251
Full-time equivalent of all other positions	42	[1] 41	[1] 42
Average number of all employees	273	[1] 271	[1] 279
Number of employees at end of year	344	344	352
01 Personal services	$1,678,857	$1,675,057	$1,722,957
02 Travel	108,700	108,700	119,700
03 Transportation of things	17,700	17,700	21,700
04 Communication services	9,600	9,600	9,600
05 Rents and utility services	10,200	5,200	5,200
06 Printing and reproduction	20,500	20,500	20,500
07 Other contractual services	94,800	94,800	98,800
Reimbursements to "National Institutes of Health management fund, Public Health Service"	499,000	498,000	518,000
08 Supplies and materials	79,900	79,000	83,400
09 Equipment	33,400	33,400	43,900
11 Grants, subsidies, and contributions	3,689,000	3,689,000	3,835,000
Contribution to retirement fund	57,000	58,700	60,400
15 Taxes and assessments	9,500	9,500	10,000
Subtotal	6,308,157	6,299,157	6,549,157
Deduct quarters and subsistance charges	6,157	6,157	6,157
Total obligations	6,302,000	6,293,000	6,543,000

[1] Reduction in employment to absorb costs of scientists-engineer pay adjustment is not reflected in the 1959 President's budget, but is included here since it is a mandatory item.

Summary of changes

	Positions	Amount
1958 actual appropriation	243	$6,430,000
Transfers: Comparative transfer to "General research and services, NIH"		−127,000
Adjusted 1958 appropriation	243	6,303,000
Deduct nonrecurring costs:		
Estimated savings		−1,000
Rental—costs to be absorbed by GSA		−5,000
1959 base	243	6,297,000
1959 appropriation request	243	6,293,000
Net change requested	0	−4,000

	1959 budget estimate		1959 House allowance	
	Position	Amount	Position	Amount
Decreases:				
Reduction in research projects to absorb indirect costs		$195,900		
Reduction in miscellaneous objects to absorb costs of annualization of retirement contributions		1,700		$1,700
Reduction in employment to absorb costs of scientists and engineers pay adjustment		[1] 6,000		[1] 6,000
Reduction in reimbursement to National Institutes of Health management fund		1,000		
Reduction in miscellaneous objects		3,000		3,000
Subtotal decreases		207,600		10,700
Increases:				
For mandatory items:				
Retirement contributions: Annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)		1,700		1,700
Pay adjustment costs for scientists and engineers		[1] 6,000		[1] 6,000
Subtotal, mandatory increases		7,700		7,700
For program items:				
Amount necessary to support full indirect costs		195,900		
Research projects in aging, periodontal diseases, and epidemiology				146,000
Direct research in epidemiology			3	30,000
Direct research in human genetics			4	50,000
Review and approval functions			1	4,000
Net change in reimbursement to National Institutes of Health management fund				19,000
Subtotal, program increases	0	195,900	8	249,000
Total change requested	0	−4,000	+8	+246,000

[1] Scientists-engineer pay adjustment is not reflected in the 1959 President's budget, but is included here since it is a mandatory item.

Effect of House Action

Activity No. 1 (a)—Research projects

The House increased the total funds available for research projects by $146,000 to support additional research projects in the areas of aging, periodontal dieases, and epidemiology.

Activity No. 2 (a)—Research

The full amount requested of $1,223,000 and 104 positions was allowed by the House; and in addition it provided an increase of $100,000 and 7 positions. This increase will be utilized in two areas, primarily: Epidemiology and biometry, and the human genetics study. This is an increase of $95,000 over the 1958 appropriation.

Activity No. 2 (b)—Review and approval of grants

The full amount requested of $96,000 and 7 positions was allowed by the House and in addition it provided an increase of $4,000 and 1 position. This increase will be used to provide for additional staff to process the increased research projects workload. This is an increase of $2,000 over the 1958 appropriation.

Prepared Statement

Senator Hill. Dr. Knutson, we are always happy to have you here with us. We welcome you back this morning. We will be delighted now to have you proceed in your own way.

Dr. Knutson. First, I would like to sbmit my formal statement.

Senator Hill. That will be put in the record at this point.

(The statement referred to follows:)

STATEMENT OF CHIEF DENTAL OFFICER, PUBLIC HEALTH SERVICE

Mr. Chairman and members of the committee, this statement relates to those activities of the Public Health Service concerned with the prevention, control, and treatment of diseases and abnormal conditions of the oral cavity. The budget proposal before you requests an appropiration of $6,293,000 for these activities in fiscal year 1959. This compares with $6,303,000 currently available.

The importance of good oral health to the individual embraces the idea of the relation of dental health to total health. This concept becomes clearer as dental research probes the problems of bacterial action, nutrition, abnormalities of growth and development, hereditary factors, and other areas of investigation. The utilization of new control procedures, the development of resources for dental manpower, the study of problems of aging, and the training of auxiliary dental personnel to permit a broader coverage of dental treatment are among the other important phases of dental health activities included in this budget request.

Dental diseases are the most nearly universal of the afflictions which affect the health of mankind, and their chronic recurring nature presents a continually changing problem to each individual throughout life. The attention which we devote to the treatment, cure, and prevention of dental diseases must be consistent with our interest in all health problems. Dental research, the first and most important component of a total dental health program, is making substantial contributions to basic biologic science. This is evidenced by studies in chemistry, nutrition, bacteriology, physiology, and other areas of investigation related to oral diseases.

In June 1958, the National Institute of Dental Research will come to its 10th anniversary. During the years since its creation by the Congress, efforts have been directed toward developing a broad program of basic research both in the laboratories at Bethesda, and in the dental schools and research centers throughout the country. The most outstanding accomplishment has been the establishment of the efficacy and safety of fluoridation of public drinking water supplies as a means of substantially reducing tooth decay.

The recently expanded research and training grants programs of the Institute have been utilized quickly by the dental schools. In some cases their teaching and research staffs have been expanded and curricula arranged to permit the establishment of research training centers. These centers are designed to increase the number of persons with knowledge and appreciation of research and its role in dental education and dental health.

A brief description of the dental health programs and plans for their continuation are included in the following pages.

Research grants

The most significant development in the research grants program during the past 2 years has been the marked increase in the number and a broadening of the type of research projects being supported. The number of research projects now supported is approximately 300, distributed among 82 institutions in 32 States and 3 foreign countries. Over 90 percent of the dental schools now have active research projects. The same high standard of research quality has been maintained by the dental council through a critical evaluation of applications and the awarding of grants for only the most promising projects.

It seems clear that the increased opportunities which have been provided during the past 2 years will profoundly affect the course of research in dental schools, and also have a deep-seated effect on the quality of dental education In addition to continuation of basic and clinical research, it was possible for the first time, through program grants, to give investigators increased stability by long-range support, and permit a broadening of scientific base.

The presently available funds have been expended largely for the purpose of continuing, on a broader and firmer base, the support of those individuals who had received grants in prior years. In planning for future requirements, the council has appointed ad hoc committees to study the research needs in such essential fields as periodontal disease, aging, radiation, and abnormalities of growth and development. Also for purposes of long-range planning, the council is studying the means whereby basic research related to dental disease can be encouraged in science departments of nondental academic institutions.

Research fellowships

The fellowship program in coordination with our graduate training program is fundamental to the research grants program since it furnishes a continuous supply of well-trained research workers. Fellowships are designed to increase the number of younger individuals trained primarily in the basic sciences related to oral health.

Generally speaking, a dentist is trained and graduated essentially as a clinician with practically no research training or experience. The research fellowship program seeks to correct this situation in several ways: (1) By introducing the undergraduate dental student during his formative years to some research experience through the part-time fellowship program; (2) by furnishing postdoctoral support to recently graduated dentists who wish to obtain fundamental basic science training together with research experience; and (3) by supporting through the special research fellowship the more experienced individuals, especially mature clinicians, who desire additional training in those basic sciences relating to their clinical interests.

A recent evaluation of the fellowship program shows that 97 percent of the total of former dental research fellows are currently engaged in research. Moreover, 67 percent of the total are teaching in dental, medical, or graduate schools.

Training grants

The training grants funds are providing continued support for 15 research training centers. These centers are located in schools geographically distributed throughout the Nation. They are designed to provide future teachers and researchers as faculty members of dental schools. Emphasis is being given to the training of clinicians in research methods and procedures. For purposes of improving dental education and increasing the overall dental research potential, this combination of the teacher and research worker is considered fundamental. Approximately 50 trainees were appointed during the first year of this program.

During the past 2 years, 4 new dental schools have been established. It is anticipated that, during the next few years, between 5 and 10 more new schools will be established and the enrollment of those schools already in operation will be increased. This places a high premium on the number and quality of individuals who are now in training and can assume teaching or research positions in the dental schools of the future.

RESEARCH AT BETHESDA

As newer knowledge is made available in the various health fields and as awareness and recognition of the intimate relationship existing between oral and systemic disease increases, the scope of responsibility facing dental research becomes ever broadened. With relatively few investigators available to cope with the many problems demanding attention, the number of research activities engaged in by the Dental Institute staff is necessarily limited. However, in recognizing the charge of responsibility to serve the health needs of the Nation by adding to our store of knowledge, a broad approach is essential. Wherever possible, the intramural research activities are being correlated with extramurally supported projects in order to cover as broad a frontal attack as possible on the oral disease field. While at the present time major attention is being given to a few specific areas, there is, nevertheless, a continuing responsibility to support minor activities which might bear considerable fruit in the future and represent the major activities of the next several years. Program areas of major emphasis are mentioned below:

Genetic study

Research activities in the field of human genetics have been emphasized during the past year. The special interest in this study by investigators in all seven Institutes of the NIH has resulted in a program of ever-increasing productivity. Due to this broadened scope of responsibility, a separate Section on Human Genetics was recently established in the Dental Institute. The activities of this Section demonstrate a type of program which is particularly productive, both from the standpoint of dental research accomplishments and also the value to studies of other Institutes. Based on studies of a triracial isolate group of some 5,000 persons residing in southern Maryland, a number of accomplishments may be cited.

To date, eight distinct hereditary defects of enamel and dentin have been discovered. These have been classified and described clinically, histologically, and by X-ray.

An unusual and previously undescribed bone disease, characterized by peculiar thickenings (hyperostosis), has been described and studied clinically. Found in 5 members of 1 family, the first symptoms of the disease characteristically appear at about 4 to 5 years of age with swelling, always on the right side of the jaw, accompanied by a facial paralysis, and gradually involving both sides of the face. At about 6 to 9 years there appears a loss of hearing and eye abnormalities. Of particular interest is the fact that although all bones finally become affected, the usual laboratory tests for calcium, phosphate, etc., in the blood are within normal limits. These cases are of special interest to investigators in the Institute of Arthritis and Metabolic Diseases.

Also under study at present are a number of cases presenting abnormalities of speech. Attributed to a variety of hereditary structural deformities (tongue-tie, cleft palate, malocclusion, and malformed teeth), these speech defects are being thoroughly studied by means of X-ray, models, and tape recordings in order to evaluate the therapeutic benefits of speech therapy and surgical correction. This phase of the study is being conducted in cooperation with the Speech Clinic of the University of Maryland.

Other important aspects of the overall genetic study, pursued cooperatively with investigators in other Institutes, are being related to the description and categorization of numerous hereditary disease entities, some of which may have interrelated causative factors. These include albinism, anemia, deafness, eye disturbances (glaucoma), and a variety of other defects involving the heart, kidney, liver, spleen, and thyroid.

Study of bacteremias following operative procedures in the mouth

For many years, it has been recognized that infection of the blood stream (bacteremia) can follow various oral surgical procedures, such as tooth extraction and routine treatment for pyorrhea. However, considerable difference of opinion has been expressed relative to the incidence of these occurrences, as well as procedures for prevention. Current studies being pursued by this Institute have been related primarily to establishing the true picture of incidence. Based on newly devised techniques of blood culturing, both from the standpoint of sample size and growth media, an incidence of 85 percent positive blood cultures has been discovered after dental surgery and periodontal treatment. This unusually high figure is based on a series of 67 cases to date. It is apparent from these observations that special treatment procedures must be instituted by the general practitioner in order to avoid such serious sequelae as heart lesions following routine dental procedures.

Studies on the minute structure of developing and mature dental tissues and bone

Important findings related to the crystal structure of calcified tissues have been made possible by techniques of electron microscopy and electron diffraction. Of major concern in this general field of tissue study is the development of more efficient equipment. Of particular importance in this regard has been the development by investigators of a technique for the successful preparation of ultrathin tissue sections (0.00001 millimeters).

Evidence accumulated to date provides information on the general size, shape, and orientation of crystallites comprising enamel and dentin of the teeth. These studies are also providing important in formation on the several stages in the life history of cartilage cells and the ossification of the cartilage matrix. With the utilization of X-ray microscopy, data are becoming available on the distribution and character of the mineral component of both the teeth and bones as it is progressively laid down during development. These studies in this important program area will further our understanding of the mechanisms of calcification as well as clarify the process of tooth and bone development.

Studies on the nutritional aspects of oral disease

Current studies are providing important evidence that nutritional factors play an essential part in dental caries and periodontal disease. For example, the level and composition of protein, as well as the presence of many distinct chemical entities, are being shown to have a marked influence on tooth decay in experimental animals. It is becoming increasingly apparent that factors beyond those confined to the oral cavity may be extremely important. For example, a significant reduction in tooth decay in rats is brought about by administering a protein (lysine) and other chemicals by stomach tube rather than by incorporation into

the food. These observations that chemicals can affect the incidence of dental caries without any direct action within the oral cavity, provides evidence that systemic metabolic factors can be influential in increasing as well as decreasing dental caries.

Having established the efficacy and safety of fluoride for the control of dental caries, current emphasis is being placed on other promising methods which might ultimately serve to completely control this still widespread disease. One approach is through the addition of dicalcium phosphate to the dietary. Based on animal studies at the Dental Institute and at Malmo, Sweden, rather significant evidence has been assembled to indicate that this mineral compound can bring about a pronounced protective effect. A field study to evaluate this phenonmenon is contemplated for the immediate future.

Studies utilizing germ-free animals

Other than the excellent exploratory work at the University of Notre Dame, relatively little use has been made of germ-free animals to study dental problems. One of the more important current changes in program emphasis will be studies utilizing these methods.

There is a strong background of experience among the Institute's investigators dealing with the production of experimental caries in rats, both from a bacteriological as well as a nutritional standpoint. Initial experiments with germ-free animals will deal with attempts to produce caries in germ-free rats by the introduction of selected strains of oral bacteria. As the work progresses, it will be possible to study, singly and in combination, many of the nutritional factors which are thought to influence the development of, or susceptibility to, caries.

Periodontal disease (pyorrhea) is also known to occur in rats, guinea pigs, and hamsters. Although investigators have not studied this problem in detail as yet, there is a considerable backlog of information accumulated in other studies which suggests that certain bacteria play a role. Which specific bacteria are the most important, however, is not known.

Questions of this type cannot be satisfactorily resolved unless the extensive oral microflora of the animals can be controlled as is possible in germ-free work.

Studies presenting promising leads for future activities

1. Histochemical procedures are being developed for the demonstration and precise localization of enzyme activity adjacent to malignant growths. This holds promise of being a useful diagnostic tool. Other histochemical studies are showing, more clearly than before, enzyme activity in developing bones and teeth. These promise to add much to our knowledge of calcification.

2. Studies of the chemical composition of saliva in caries-free and caries-active individuals, as well as a determination of the degree to which salivary composition may reflect general disease states, are providing another base upon which to evaluate the mechanism of oral disease.

3. Studies of the physiologic response of ambulatory patients to various general anesthetic agents are leading to a reappraisal of certain concepts of systemic reactions to various types of anesthesia.

4. Studies on prosthetic reconstruction for maxillo-facial defects and the formulation of principles of design that could contribute to improved functions of mastication and speech are promising much needed help in these categories of disablement.

5. Experimental studies of hereditary factors involved in the caries process (e. g., development of caries-susceptible and caries-resistant strains of hamsters) are providing worthwhile information on caries etiology.

During fiscal 1959, it is planned to continue the above-mentioned research studies.

DENTAL PUBLIC HEALTH

The goal of the programs operated by the Division of Dental Public Health is to develop and apply the findings of basic research for the prevention and control of dental diseases and disorders as widely as possible through public health procedures. Achievement of this objective requires public awareness and acceptance of good dental health practices as well as adequate resources and personnel.

Although substantial advances in controlling and preventing some dental diseases have been made through discoveries of research and new techniques, the resources of States and communities to apply these measures are limited. At the State and local levels there is a great need for trained personnel and funds to plan and develop dental health programs which would apply known preventive

and control measures, and provide care for special population groups. These programs cannot adequately meet the present dental health problems, much less adapt to the changing dimensions of these problems resulting from an increasing shortage of dentists, the rising demand for dental services, and the increasing proportion of the population which is aged or chronically ill. Solutions to these problems can be approached realistically only through long-range dental programs at the State and local levels, and require adequate personnel and sound budgetary practices.

Through qualified dental staffs in Public Health Service regional offices, the Division provides professional and technical assistance to the States and communities in such areas as personnel utilization, program planning and budget management, definition of dental health problems, administration of dental clinics, dental services for public assistance recipients, and in-service training programs. Dental hygiene and statistical consultant services are furnished to the States for special projects. Technical assistance on the fluoridation process and methods of maintaining fluoridation standards are made available. The Division also engages in studies to develop and improve materials and equipment and new preventive and control measures which might be adapted to State and community use.

Fluoridation of public water supplies for the partial prevention of dental decay will continue to receive emphasis in implementing the program activities of the Division. Currently more than 32.5 million people in over 1,500 communities, including a majority of the Nation's 18 largest cities, are now using fluoridated drinking water. Analysis of the status of fluoridation in this country indicates that greater effort must be made among the smaller communities. About 90 percent of all public water supplies are in communities with less than 5,000 population.

One problem associated with fluoridation has been a persistent shortage of materials suitable for use in fluoridating community water supplies. A few communities have had to stop fluoridation temporarily. Research efforts in the laboratories of this Division have been effective in developing a technique for using fluorspar, one of the most common substances on the earth's surface, for this purpose. Fluorspar is readily available and its use will reduce the cost of fluoridation by two-thirds. This technique is now being demonstrated in a small community and will be used in a larger community during the coming year.

The practicability of a device developed by the Division for the fluoridation of individual water supplies now makes possible the extension of the benefits of fluoridation to rural and suburban populations not served by public water supplies. Testing of this device has progressed to the point where its potential for successfully meeting the problems of rural fluoridation is assured.

Studies of methods for removing excess amounts of naturally occurring fluorides from public water supplies have resulted in the development of practical procedures for this purpose which compare favorably in cost with other water treatment measures. Release of this information during the current year has produced considerable interest and it is planned to actively encourage and assist communities in defluoridating water supplies where dental fluorosis is a problem.

During the past year substantial progress has been made in study of the special problems related to the provision of adequate dental care services to the institutionalized and homebound chronically ill and aged. Activities presently in operation were designed to accumulate data on the nature and extent of this problem, and to develop methods for providing dental services for these groups. Projects are currently being conducted at the Nevada State Mental Hospital, Reno, Nev.; the Montefiore Hospital and Beth Abraham Nursing Home, Bronx, N. Y.

Prompted by the observation that the percent of voluntary participation of children in community care programs is lower than expected, several small-scale exploratory studies will be performed during the next 18 months to gain some insight into the reasons why treatment is refused. Such information would be of great value in developing measures or techniques which would promote greater acceptance of health procedures by the public.

Preliminary findings from a study conducted by this Division in Puerto Rico of adults with untreated cleft palate, indicate that facial development has not been impaired and the dental arches have developed normally. These findings indicate that efforts to obtain closure too early in life may often fall far short of their objective and sometimes produce malformed arches and extensive scar tissue. These circumstances seriously interfere later in life with attempts to provide the individual with prosthetic appliances. It would appear from the study that many cleft palate cases should not be surgically treated and that restoration of function should be accomplished through prosthetic devices. The

number of cases examined, however, will need to be increased before conclusive evidence is obtained confirming the early findings.

DENTAL RESOURCES

One of the greatest threats to the Nation's dental health is the growing shortage of dental manpower. The Division of Dental Resources, which is giving special attention to this problem, estimates that on the basis of demand alone the current shortage of dentists stands at 13,500. Estimates prepared by the American Dental Association indicate that if the current dentist-population ratio is to be maintained, the number of dental graduates will have to be increased by approximately 100 per year for the period 1960–75.

The current situation is primarily the product of a period of tremendous population growth with only a moderate increase in the supply of dentists. Since 1940 only 10,000 practicing dentists have been added to serve a population increase of more than 40 million. Concurrently, there has been an increased standard of living, higher educational levels of the public, an increased use of bank plans for postpayment of dental care, and a trend toward greater urbanization, all of which are factors associated with increased demand for dental services.

Prepaid dental care is expected to grow in the same dramatic fashion as prepaid medical and hospital care. However, it is generally agreed that because of the nature of dental disease and dental care, many of the principles which have governed the development of prepaid medical care are either inapplicable to dentistry or must be modified. Special and immediate preparation is required to assure that voluntary dental prepayment programs are established on a sound basis, that they grow in an orderly fashion, and that maximum benefit is derived by all concerned.

The Public Health Service is being called upon to assist in solving the new set of problems associated with both the manpower shortage and prepayment in dentistry. Requests have been received from State health authorities, dental societies, labor-management groups, and others. The Service has been able to respond only in a very limited fashion.

Two studies on dental manpower needs were completed during the past fiscal year. The first was a study of dentist requirements through 1975 in 16 Southern States, which was undertaken in cooperation with the Southern Regional Education Board. As in the case of the earlier Western States study, the findings for the South will provide a basis for the regional and State planning which is needed if future demands for dental services in the region are to be met.

The second study, just completed, was conducted in cooperation with the New England Board of Higher Education. The pattern of the study follows that used in the West and South. Findings will serve as a basis for regional and State planning to combat the dental manpower shortage in the New England area.

Another facet of the problem of alleviating the dental manpower shortage is the training and effective use of auxiliary personnel (dental hygienists and dental assistants). During the past fiscal year a compilation and analysis of data pertaining to facilities for training dental hygienists, and the characteristics of dental hygienists, their distribution, nature of their employment, and the plans of nonpracticing hygienists to return to work was completed. The findings of the study will be used for appraising the current status of the hygienist's profession and for projecting estimates of future needs.

A research and demonstration project, designed to teach dental students to use dental assistants effectively, is now in its second year of operation. Six dental schools are participating and each has completed at least 1 year of the program. Reports from the schools indicate that the objectives of this program are realistic and attainable.

A study of existing prepayment dental care plans was completed during the year. The report of this study includes a basic description of comprehensive and limited prepaid, as well as reduced fee, dental care plans sponsored by unions, employers, fraternal or community groups. Each plan is described as to sponsorship, area served, type of benefit, eligibility, number of enrollees, method of operation, benefits, and cost. Another important contribution in the field of dental prepayment was made with the completion of a study of the development and operation of a statewide dental service corporation.

A continuation of the regional studies of dental manpower requirements is proposed which is expected to culminate in a nationwide report. The Division

will assist individual States in studying local dental manpower problems and in planning for new or expanded facilities. Without some technical assistance, most States would be unable to undertake comprehensive surveys of this type. These activities are expected not only to provide the basic information essential to manpower planning but to help considerably in stimulating appropriate action by responsible State and local authorities.

The Division has collected and plans to continue to obtain information on various aspects of dental prepayment. The areas in which the need for additional information is greatest include: (*a*) professional services required by different plans and different population groups; (*b*) the most reasonable actuarial methods to use; (*c*) cost determinations of various types of programs; (*d*) statistical compilations of preexisting and maintenance dental needs; (*e*) simple and inexpensive administrative techniques; and (*f*) greater knowledge of utilization patterns for accurate predictions of premium amounts.

Currently under study are five different types of programs serving different types of population groups. Some of this needed information will evolve from these studies in the future.

The pilot studies initiated during fiscal years 1957 and 1958 in the dental schools of the Universities of Alabama, Illinois, Iowa, Minnesota, North Carolina, and Kansas City were designed to assist the schools in developing and assessing effective techniques for teaching dental students to work efficiently with chairside assistants. It is essential that this program, now in the second year of a 5-year schedule, be continued and that it be expanded when possible. The use of chairside assistants has not been a part of the dental school curriculum, and the habit of working alone, acquired in school, carries over into practice and is not easily broken. Both the American Dental Association and the dental schools agree that the dental school curriculum should be altered to incorporate training in the use of chairside assistants, so that future graduates will, at the outset, acquire work habits which permit the fullest possible utilization of their scarce skills.

It is also proposed to continue the effort to perfect an index of malocclusion (disfiguring abnormalities of the teeth and jaws). The development of a reliable measuring device for assessing the prevalence of malocclusion will permit epidemiological surveys in this field and may lead to the development of preventive measures. Immediate plans in this area include studies to test the usefulness of the present approach in determining the existence of age and sex-specific values, and in comparing the malocclusion picture in groups with high and low levels of dental care and periodontal disease.

EFFECT OF HOUSE ACTION

The House allowed a $250,000 increase over the President's budget. Of this increase, $146,000 will be used to support additional research grants, and $100,000 will be used to furnish additional support to our intramural research program, primarily in the human genetic study and in epidemiological studies. Finally, $4,000 was allowed to provide review and approval services for the expanded research grant program.

Summary of changes

	Positions	Amount
1958 actual appropriation	243	$6,430,000
Transfers: Comparative transfer to "General research and services, NIH"		−127,000
Adjusted 1958 appropriation	243	6,303,000
Deduct nonrecurring costs:		
Reserve for savings		−1,000
Rental—costs to be absorbed by GSA		−5,000
1959 base	243	6,297,000
1959 appropriation request	243	6,293,000
Net change requested	0	−4,000

	1959 budget estimate		1959 House allowance	
	Position	Amount	Position	Amount
Decreases:				
Reduction in research projects to absorb indirect costs		$195,900		
Reduction in miscellaneous objects to absorb costs of annualization of retirement contributions		1,700		$1,700
Reduction in employment to absorb costs of scientists and engineers pay adjustment		[1] 6,000		[1] 6,000
Reduction in reimbursement to National Institutes of Health management fund		1,000		
Reduction in miscellaneous objects		3,000		3,000
Subtotal decreases		207,600		10,700
Increases:				
For mandatory items:				
Retirement contributions:				
Annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)		1,700		1,700
Pay adjustment costs for scientists and engineers		[1] 6,000		[1] 6,000
Subtotal mandatory increases		7,700		7,700
For program items:				
Amount necessary to support full indirect costs		195,900		
Research projects in aging, periodontal diseases, and epidemiology				146,000
Direct research in epidemiology			3	30,000
Direct research in human genetics			4	50,000
Review and approval functions			1	4,000
Net change in reimbursement to National Institutes of Health management fund				19,000
Subtotal program increases	0	195,900	8	249,000
Total change requested	0	−4,000	+8	+246,000

[1] Scientists-engineer pay adjustment is not reflected in the 1959 President's budget, but is included here since it is a mandatory item.

EFFECT OF HOUSE ACTION

Activity No. 1 (a)—Research projects

The House increased the total funds available for research projects by $146,000 to support additional research projects in the areas of aging, periodontal diseases, and epidemiology.

Activity No. 2 (a)—Research

The full amount requested of $1,223,000 and 122 positions was allowed by the House; and in addition it provided an increase of $100,000 and 7 positions. This increase will be utilized in two areas, primarily: Epidemiology and biometry, and the human genetics study. This is an increase of 95,000 over the 1958 appropriation.

Activity No. 2 (b)—Review and approval of grants

The full amount requested of $96,000 and 7 positions was allowed by the House and in addition it provide an increase of $4,000 and 1 position. This increase will be used to provide for additional staff to process the increased research projects workload. This is an increase of $2,000 over the 1958 appropriation.

DENTAL RESEARCH PROGRAM

Dr. KNUTSON. Mr. Chairman, the major part of the budget before you, that is, the "Dental health activities" budget, is for the support of dental research programs. However, incorporated in this budget are two other programs. The first of these is a program concerned with the dental resources of the Nation, that is, the manpower available to deliver dental health services, and with the rapidly changing methods of paying for such services.

The second of these programs is the dental public health program which is engaged in the development and refinement of preventative and control procedures and in fostering their utilization by community and State programs.

Referring specifically to the dental research program, 2 years ago a six- or seven-fold increase in the funds for dental research grants was made available. This program has been in operation long enough for us to perceive a very desirable broadening of the scope of dental research in this country, and also to observe that the dental schools and dental research institutions of this country have not only absorbed those funds but the quality of the projects submitted has been maintained at the high standard that was in effect before the increased funds for grants became available.

One of the problems that has been plaguing us for some time in the dental research field has been that of obtaining well-trained and well-qualified research workers. It is especially gratifying, therefore, to report that the increased funds made available only 2 years ago for the training of dental research workers has effected the establishment of 15 training centers in dental schools throughout the Nation.

Senator HILL. Fifteen now?

Dr. KNUTSON. Fifteen, yes—15 training centers in dental schools.

These training centers are doing much, not only in facilitating the orientation of teachers and students in the principles and philosophy of dental research but they are having the dual effect of strengthening the dental education program itself.

Now the progress being made in dental research, both in our own operations at the National Institutes of Health and in the dental schools, has been described in the highlight statement which has been made available to the committee.

TYPE OF RESEARCH CONDUCTED

However, I will select from that statement 2 or 3 items to indicate that the kind of research that is being done in the dental area is becoming increasingly basic in character, and that, in the extension of dental research, our dental research workers are working more closely with others in the basic sciences. This collaboration between the dental and our other research institutes is increasing rather rapidly and this we are very pleased to note.

An example here—in fact, an outstanding example—is in the field of genetics, a study started by one of our dental research workers who was interested in dental malformations of genetic origin. This is a study of an isolated group which has been very productive of congenital defects in the dental field. These include such defects as tonguetie, cleft lip and palate, malformation of the teeth, and malrelations of the jaws. This group also has produced a rather large number of individuals who have other congenital defects of interest to our medical research workers so that today this study is one which involves virtually every institute of the National Institutes of Health.

Another finding of interest initially resulted from studies designed to determine something more about the metabolism of fluorides. In this study a group of fluoride compounds, which are very tightly bonded, very firmly fixed, were tested. Through the use of radioactive isotopes it was found that one of them, potassium hexaplouro-

phospate when ingested is eliminated from the bloodstream within 18 hours and totally from the body within 24 hours, completely unchanged. I mention this as an example of a finding which may be of more importance in the field of kidney functions than it may be in the immediate dental field.

In another study, one of our histochemists has isolated an enzyme which is active in the developmental stages of bones and teeth. This enzyme is called esterase. Here is another finding that I am sure will be of concern in the whole area of growth and development, and will not be limited to those interested in the development of dental structures.

A final example is in the nutrition field and relates to one of the amino acids, lysine. This material has been tested in connection with our studies on dental caries in rats. It has been determined that rats deficient in lysine have a marked increase in tooth decay. This is of special interest not only in the dental field but to nutritionists, since heretofore only refined carbohydrates, not proteins, were believed to be involved in the dental caries process.

There are, of course, other dental-research areas having broad implications, including epidemiological studies of oral diseases, studies on germ-free animals, oral cancer, and bacteria in the blood stream following oral surgery, with its importance in certain heart illnesses.

There are other recent advances in dental research outlined in a prepared statement which I could offer for inclusion in the record, which I hope would be helpful and informative to the committee.

Senator HILL. Let that statement appear at this point in the record.

(The statement referred to follows:)

RECENT ADVANCES IN DENTAL RESEARCH, JANUARY–MARCH 1958

ITEMS OF INTEREST ON PROGRAM DEVELOPMENTS AND RESEARCH STUDIES CONDUCTED AND SUPPORTED BY THE NATIONAL INSTITUTE OF DENTAL RESEARCH

X-ray doses in dental roentgenography

Radiation dosage from proper dental diagnostic X-ray procedure is but a minor fraction of the dosage which an individual will receive from environmental sources, reports an NIDR grantee at the University of Michigan School of Dentistry.

Through the use of adequate equipment and materials, Prof. Albert G. Richards has shown in a recent publication that complete roentgenographic examination of the jaws will result in a total dosage to gonadal tissue of approximately 2.14 milliroentgens. When this complete procedure is repeated 46 times, the total gonadal exposure would be but 100 milliroentgens, which is the same negligible amount that would be received from 30 years' exposure under ordinary circumstances to the radiation resulting from atomic weapons at the present rate of their testing. When it is remembered that during the same 30-year period, an individual is exposed to a total of 4,300 milliroentgens from natural radiation, such as cosmic rays and radioactive minerals, it is evident that dental X-ray equipment for diagnostic purposes creates a minimum of hazard when properly used.

Proper filtration, cone angle, target distance, X-ray film emulsion, and processing enabled the investigator to limit the amount of radiation reaching the gonads to one ten-thousandth the amount delivered to the face in producing the oral X-ray; and the amount of skin dose over the region of the maxillary bicuspid teeth, where dosage is heaviest, was only 6.5 roentgens for a complete examination.

The results establish today's X-ray equipment and materials as entirely adequate in holding total bodily dosage to a minimum. However, inadequate equipment or its improper use are problems which must be met through the institu-

tion of adequate control programs of education and inspection at the national level.

Periodontal disease in children of rural areas

A study of disease of the gums and other tissues around the teeth (periodontal disease) in children in rural areas in 25 Indiana counties reveals that significantly more of such disease occurs in children in these rural areas than in a series of urban children studied. The differences, however, were not attributed to any factors of rural life per se. The severity of the disease was closely associated with an undefined social factor influenced by either individual or community levels of education.

The study was conducted by Drs. E. M. Benjamin of Worthington, Ind., A. L. Russell, National Institute of Dental Research, and R. D. Smiley, Indiana State Board of Health. It included nearly 4,000 children from rural areas of 25 Indiana counties.

The children ranged in age from 9 to 20 years and were scored for periodontal disease on a scale devised by Dr. Russell which is based on the classical clinical signs—inflammation, pocket formation, and loss of function. Their group scores were significantly higher than those for urban children, particularly in the younger ages.

The investigators did not attempt to attribute the differences to rural life as such, and concluded rather that on the basis of their information, the severity of the disease was closely associated with an undefined social factor which corresponded to individual or community levels of education. (Reexamination of earlier data from Colorado Springs and Boulder, Colo., revealed an association between severity of disease and educational attainments of the individual.)

Since persons free from signs of disease showed nearly equivalent educational backgrounds, the investigators concluded that separate factors may affect the severity of periodontal disease as distinct from some or all of the true etiologic factors.

New knowledge of action fluorides on teeth and bone

Ever since the value of fluorides was established as a major factor in preventing tooth decay, there has been speculation as to how this is accomplished. The object of a series of investigations in the Laboratory of Oral and Biological Chemistry, NIDR, has been to learn the manner in which fluoride acts on the various inorganic components of mineralized tissue. Latest findings indicate: (1) that the building of mineralized tissue or mineral exchange is not accomplished entirely by recrystallization, but that the organic matrix of bone, enamel and dentin is involved in this action; and (2) that the presence of fluorides affects the rate of exchange.

H. G. McCann and E. H. Fath studied the rate of phosphate exchange in hydroxyapatite, enamel, dentin, and bone. The first investigation was concerned with the mechanism of the exchange of fluoride and phosphate in the various tissues, and the second was concerned with the effect of fluoride on the exchange.

Fluoride appears to increase the rate of exchange of P^{32} (radioisotope of phosphorus), with synthetic hydroxyapatite, human enamel and dentin, and rat dentin and bone.

Using fresh and ashed bone, it was found that a radioactive phosphorus exchange with the ashed bone is practically complete in 48 hours, whereas a period of a month is required before there is a similar degree of exchange when fresh bone is used. This study suggests that diffusion of fluoride and phosphate through the organic framework of dentin and bone is an important factor in this rate of mineral exchange.

In the second experiment the simultaneous use of fluoride and radioactive phosphorus has shown that 2 and 10 parts per million fluoride increase the rate of exchange of the radioactive phosphorus with synthetic hydroxyapatite, with human enamel and dentin, and with rat dentin and bone. However, a concentration of 100 parts per million fluoride seems to retard this action. The rate of exchange is also increased by the presence of the fluoride ion even when the enamel, dentin, and bone have been previously treated with fluoride either in vivo or in vitro.

The use of vital stains as selective indicators for beginning dental caries

Studies on dental caries in experimental animals have shown that many factors affect caries susceptibility, including those which influence tooth formation and those which control the oral environment. Although vital stains have been used

for many years to demonstrate periods of tooth and bone formation, recent studies at NIDR have shown their value as chemical indicators in the caries process and for early detection of dental caries.

The recent development of experimental caries in the incisor teeth of rats suggested the use of vital staining as an indicator for caries susceptibility. In a series of experiments recently published as a preliminary report by Dr. R. M. Stephan, a variety of vital stains were tested by injection and by addition to the drinking water and diets of rats. Several anthraquinone dyes, such as alizarin-red-S and alizarin-blue-S, were found to stain selectively the earliest stages of caries when given in the drinking water or diet. On the other hand, when dyes were injected and thereby incorporated into teeth during their formation, they were leached out during the caries process. Since different vital stains or dyes seem to act selectively in different zones in caries susceptible areas, they are of value as indicators for different chemical reactions which take place in the caries process.

Of further significance in these studies was that some dyes, which failed to stain tooth structure but did stain bacterial dental plaques, caused a significant reduction in the development of caries.

The effect of amino acid deficiency on calcification

Dietary deficiency of the amino acid, lysine, in experimental animals is associated with a decrease in the skeletal deposition of radioactive calcium. Investigators in the National Institute of Dental Research indicate that this was due in part to an inability to retain skeletally deposited calcium, apparently the result of defective bone growth. This study of calcium metabolism is providing valuable information on the properties of the mineral phase of bone.

In a series of experiments with rats, R. C. Likins, Laboratory of Oral and Biological Chemistry, NIDR, L. A. Bavetta, professor of biochemistry, University of Southern California, and Aaron S. Posmer, research associate, American Dental Association, National Bureau of Standards, studied the effect of an amino acid deficiency on mineral metabolism. Lysine was the essential amino acid used because it is known to be required for normal skeletal growth.

Radioactive calcium was employed to show that an increase in dietary lysine was accompanied by an increased deposition of the radioactive calcium in bone.

It was found that the reason for the lower radioactive calcium content in the presence of a lysine deficiency could not be related to chemical or physical changes in the bone per se, but appeared to be the result of an inability of these rats to retain their skeletal deposits of calcium. These findings have shed further light on the relation of growth to the mineral metabolism of skeletal tissues.

In view of these findings, it would appear that the increased loss of calcium with lysine deficiency is the result of a failure of bone growth.

Epidemiological study of periodontal disease in India

Recent communications from India indicate a large measure of success from the cooperative epidemiological study of periodontal disease initiated last year by the Government of India (through the Indian Council for Medical Research), the World Health Organization, the University of Michigan, and the National Institute of Dental Research.

In July and August of 1957, Dr. J. C. Greene, Epidemiology and Biometry Branch, NIDR, cooperated in a program designed to study the epidemiological and clinical characteristics of periodontal disease in India. Population groups in this eastern country are generally considered to develop advanced alveolar bone destruction at relatively early ages. Two study techniques were presented to, and discussed with, the representatives of six Indian dental schools in order to encourage their active participation in the study. One procedure was based on the clinical appearance of the supporting tissues of all the teeth, while the other involved measuring the depths of gingival crevices around selected teeth. Recordings were also made of the oral hygiene status of each patient. Approximately 2,000 schoolchildren between 11 and 17 years of age, in and around Bombay, India, were selected for this study. Although a complete analysis of the data has not yet been made, a significant preliminary finding is that considerably more advanced gingivitis exists at earlier ages in India than in the United States.

A second major objective of the Indian study was to encourage and train native dental investigators in epidemiological research techniques, and thus to encourage a continued study of dental diseases in India. That this objective

is approaching accomplishment is indicated by the fact that 1 dental team in the Bombay area has now completed a survey of some 4,000 additional individuals, and that the Indian Council for Medical Research has requested active participation by many other clinical teams and has recently made awards of grants in-aid to 2 investigator teams. The data assembled by these teams will be made available to the NIDR for further analysis, and it is hoped that resulting reports will contribute to an improved health status of the Indian population and extend our knowledge of the epidemiological characteristics of periodontal disease.

DENTAL MANPOWER NEEDS

Dr. KNUTSON. Our Division of Dental Resources, as I indicated, is very active in studying dental manpower needs. It is apparent that with the present population growth and the expected population increase in this country, the shortage of dentists is probably going to become even more acute than it now is. Studies are being made in collaboration with the American Dental Association to determine specifically what the projected dental service needs will be. Dental Resources makes available these facts to the States and local health agencies so that they will know in advance the dental needs of the people.

On the brighter side, the Division of Dental Resources is assisting in training programs in the efficient use of auxiliary dental personnel. The purpose of this effort is to make available to the public the maximum dental service capacity of the present dental force.

PREPAYMENT PROGRAMS

I have indicated the increased interest in adapting prepayment plans now available for medical care to dental care services. As you know, prepayment medical care plans have been expanded rapidly over the past 10 years, but plans are just beginning to develop for dental care. Our people in the Division of Dental Resources are collecting information about the types of dental payment programs now in operation, strengths and weaknesses in these programs, and making available the facts about various methods of operation. This activity is being carried out in close collaboration with the American Dental Association.

STUDIES IN PREVENTATIVE PROGRAMS

Finally, the Division of Dental Public Health is concerned, as I mentioned, with developing procedures for preventing dental diseases, taking them out of the laboratory and testing them in the field and subsequently making the technical knowledge resulting from such testing programs available to communities and States for their use.

One of the major programs we have been concerned with is popularly known as the water fluoridation program. At the present time there are more than 1,500 communities with a total population of nearly 33 million people now utilizing this important health measure.

FLUORIDATION PROGRAMS

Dental Public Health is continuing its activities to improve the technical aspects of this procedure and has done so with some success, particularly in making available much cheaper fluoride compounds. Calcium fluoride, which is very abundant in nature, can now be used to fluoridate many public water supplies in place of sodium fluoride

and other fluorides that are being used which are 3 to 5 times more expensive.

For the development of this process in the Division's laboratory, Mr. Bellack, a chemist, and Mr. Maier, an engineer, recently received a departmental citation.

DENTAL PROBLEMS OF CHRONICALLY ILL

The Division of Dental Public Health also is concerned with the rapidly increasing problem of dental care for the chronically ill, the aged, the institutionalized, the mentally retarded, and persons in rehabilitation programs.

That is a brief summary, Mr. Chairman, of some of the activities in the dental field, and if there are any questions, I should be glad to answer them.

Senator HILL. That was a most interesting statement, Doctor. Let me ask you this question:

NEED FOR INSTITUTE BUILDING

As you know, there are funds in the bill appropriated by the House to provide the building of a new institute, so that you may get out of your present inadequate quarters and work together and concentrate your activities. You have a great need for this building, do you not?

Dr. KNUTSON. Yes, sir.

Senator HILL. I think I can tell you that the Senate, of course, will agree to keep these funds in the bill and if, when the bill passes Congress, the funds are in the bill, I wonder if you could give the committee any information as to when you might expect to get the building?

Dr. KNUTSON. I would like to call on Mr. Siepert again to answer this question regarding the building. He is directly responsible for the construction area.

Mr. SIEPERT. I would like to correct that. I am responsible for collecting the information. I do not believe I am responsible for the construction.

Dr. KNUTSON. I believe the chairman is asking for information, so it is your problem, anyhow.

Senator HILL. All right, Mr. Siepert.

STATUS OF CONSTRUCTION

Mr. SIEPERT. The present status on the dental building is that the tentative plans supplied by the contract architect have been approved by the Budget Bureau on the 14th of April.

We do not have, insofar as I know, a letter to this effect.

Mr. KELLY. It has been signed, but we haven't seen it yet.

Mr. SIEPERT. We haven't seen it yet. However we have notified the architect that as of this date he should begin to go immediately into his final plan of work. The final plans on the dental building will take considerably less time than that of any of the other projects we have discussed, the figure being only 60 days. The reason is that the dental building is being built on the same basic structural planning as that for the biologics standards building. The same architect is doing it, and he can therefore do the job in half the time. The plans

will be finished on the 15th of June and if there were a construction appropriation this year, this would mean that the bids could be advertised on the 30th of July. The contractor would have a notice to proceed on the 15th of September, and this project requires 510 days to complete. This brings us to the 15th of February 1960.

FACTORS IN PROGRAM DELAY

Senator HILL. Now, we put the funds in that planning 2 years ago. Why has there been so much delay about finally getting that going?

Mr. SIEPERT. The principal delay on the dental building—at least the initial one—involves a decision reached between the NIH and the Public Buildings Service that this project would be given a lower priority on planning than on the surgery and the biologics standards buildings. The reason for this is that, as you recall, both surgery and biologics standards buildings were "rush and urgent" appropriated funds for construction.

Senator HILL. Excuse me. You mean there was an intent by the Congress that this be rushed?

Mr. SIEPERT. Yes, sir.

Senator HILL. That it be done immediately, without any delay?

Mr. SIEPERT. Yes, sir.

When we found, at the completion of that year's appropriation, that we had in front of us the task of planning and constructing two buildings where the cash was in hand, the biologics standards building and the surgical facilities, and two more buildings for which funds were available for planning, the dental and the general office building, we were faced with the problem due to the fact that we had disbanded all of our planning staff that had done such a wonderful job for us on the Clinical Center. At the same time the Public Buildings Service had experienced a major reduction in force of its planning people, so, frankly, our problem was that we had to select which projects could be worked on first, and we believe we made the right decision on that.

At any rate when we were then able to get going on the dental building, we did not feel we had lost all of this time, because the biologics standards building had gone along toward final design and it was possible for the dental people to make a decision that they would use the biologics standards design. At any rate, this time lapse occurred from the time the appropriation became available in July 1956 until the architect's contract was negotiated on the 23d of May 1957. This is the interval where our own decisions on this put it back that far.

Since that time, I think the planning on this building has gone ahead without any untoward delay. We submitted the tentatives to the Budget Bureau for the customary clearance, in October 1957.

Senator HILL. You got the clearance?

Mr. SIEPERT. We have the clearance.

Senator HILL. I understand the letter was signed, but you haven't received it yet?

Mr. KELLY. That is right. We were advised by phone, that we can proceed. The confirming letter was actually signed by them but I have not received it.

COMPLETION DATE

Senator HILL. What is that date? What is that date? You said October?

Mr. SIEPERT. I do not have the day of the month. It was October 1957 when we submitted the tentative plans to the Budget Bureau.

Senator HILL. Then from October to the last of April.

Mr. SIEPERT. To the 14th of April when we got the clearance. In that interval, the Budget Bureau asked us questions concerning certain features of the building on January 22, and we worked up the necessary studies and information on that and supplied it to them on March 13. This culminated, after other negotiations by the Department, in the release of those plans on the 14th of this month.

Senator HILL. As I recall, when we spoke about the biologics standards building, concerning the funds requested for that, it was estimated that the building would be ready for occupancy in November of 1957. In fact, those funds were put into a supplemental bill in April 1956. That was 2 years ago.

Mr. SIEPERT. That is correct. The current construction completion date on the biologics standards building will be September 30, 1959.

Senator HILL. 1959. That will be 3½ years after the funds were made available.

Mr. SIEPERT. Yes, and 23 months, according to my arithmetic here, 23 months later than we had originally hoped. Bids for the biologics standards building were received on April 15, last, and the favorable bid comes within the original PBS cost estimate.

Senator HILL. State again now what date did you say you expected, if these funds were made available July 1 in this bill, what date you expected to occupy the dental building?

Mr. SIEPERT. We will be able to occupy the building on this schedule on February 15, 1960.

Senator HILL. February 1960. That is 2 years. How long do you thing actual construction will take?

Mr. SIEPERT. 510 days.

Senator HILL. That is, providing you have no further delays, and that everything moves right forward?

Mr. SIEPERT. Yes, sir.

LETTER FROM SENATOR GREEN

Senator HILL. Senator Theodore Green has addressed a letter to Senator Hayden, chairman of this committee, regarding the construction of a dental research building at the National Institutes of Health. Senator Green's letter will be made a part of the record at this point.

(The letter referred to follows.)

UNITED STATES SENATE,
COMMITTEE ON FOREIGN RELATIONS,
March 28, 1958.

Hon. CARL HAYDEN,
Chairman, Senate Committee on Appropriations,
Washington, D. C.

DEAR MR. CHAIRMAN: Yesterday the House passed and sent to the Senate H. R. 11645, the appropriation bill for the Departments of Labor, and Health, Education, and Welfare, and related agencies, for fiscal year 1959.

The Rhode Island State Dental Society is particularly interested in a $3,700,000 item for construction of a building to house the National Institute of

Dental Research. Please note the attached copy of a letter written me by the secretary of the Rhode Island society, Hubert A. McGuirl, D. D. S.

I would like to go on record in support of the item for the National Institute of Dental Research. In my view, this is a most worthy project.

Yours sincerely,

THEODORE FRANCIS GREEN.

RHODE ISLAND STATE DENTAL SOCIETY,
March 25, 1958.

Senator THEODORE F. GREEN,
House Office Building,
Washington, D. C.

DEAR SENATOR GREEN: The more than 400 dentists who comprise the Rhode Island State Dental Society, their families and friends, earnestly urge that you support the $3,700,000 appropriation for the construction of a building to house the National Institute of Dental Research.

Congressman Fogarty has secured the approval of his committee for this critical measure, which bears so vitally on the health and well-being of all Americans.

As dentists and your constituents we would be very proud and thankful if you would give it your full and earnest support, and have the record show that Rhode Island is 100 percent behind this vital endeavor.

With kindest regards, I am,

Very truly yours,

HUBERT A. MCGUIRL, D. D. S., *Secretary.*

LETTER FROM SENATOR WILEY

Senator HILL. Senator Hayden has also received a letter from Senator Wiley, who cosponsored the authorization for the construction of a building for dental research, urging this committee to act favorably on the estimate for the construction of the building. Senator Wiley's letter will also be inserted in the record.

(The letter referred to follows:)

UNITED STATES SENATE,
COMMITTEE ON THE JUDICIARY,
April 23, 1958.

Hon. CARL HAYDEN,
Chairman, Appropriations Committee,
Washington, D. C.

MY DEAR MR. CHAIRMAN: I am writing to urge approval of $3,700,000 in the 1959 budget for construction of a National Institute of Dental Research building.

These facilities are badly needed to provide space for expanded research in the interest of protecting the dental heatlh of the public.

As you will recall, I cosponsored the authorization legislation last session, which fortunately was approved. However, a great need still exists—in fact is increasing—for more dental research on tooth decay, therapeutic techniques in preventing and controlling bacterial infections, and otherwise carrying out an effective program in this field.

Therefore, I respectfully urge approval of the requested $3,700,000 for these much-needed research facilities to protect the public health.

With kindest regards, I remain,

Sincerely yours,

ALEXANDER WILEY.

LETTER FROM DR. JOHN R. PHILLIPS

Senator HILL. Dr. John R. Phillips, secretary, Central District Dental Society, Phoenix, Ariz., has also written to Senator Hayden in support of the construction of a dental research building. Dr. Phillips' letter will also be made a part of the record.

(The letter referred to follows:)

CENTRAL DISTRICT DENTAL SOCIETY,
Phoenix, Ariz., March 27, 1958.

Hon. CARL HAYDEN,
United States Senate,
Washington, D. C.

DEAR SENATOR HAYDEN: The Central District Dental Society of the State of Arizona, comprised of 192 members, wishes to go on record as favoring the construction of a building to house a dental research institute.

The money spent by the Federal Government for dental research is minute compared to that spent for medical research. Although dental diseases are not generally regarded as "killing" diseases, they have a higher incidence in our population than any other known disease entity.

The present dental research facilities maintained by the Federal Government are wholly inadequate. Because of this, it is impossible to retain the highly skilled personnel to carry this work forward.

Within the rapid strides being presently made in all the biological sciences at the present time, it is imperative that research in dental fields maintains the same pace.

If the new facilities produce research that reduces dental decay by only 10 percent the resultant savings in dental costs to the general public of this Nation would represent several hundred million dollars.

We respectfully submit this letter and hope that the action taken on the foregoing piece of legislation will be favorable to the dental interests of the general public.

Sincerely yours,

JOHN R. PHILLIPS, D. D. S.,
Secretary, Central District Dental Society.

ADDITIONAL TRAINING CENTERS

Senator HILL. Dr. Knutson, you stated that you are supporting now some 15 training centers? How many more schools will undertake to have similar training centers?

Dr. KNUTSON. Five other schools.

Senator HILL. How much do they request?

Dr. KNUTSON. They request $282,000.

Senator HILL. That is an average of about $56,000 per school?

Dr. KNUTSON. That is correct, sir.

Senator HILL. Now, as to the amount involved in the request for these 15 schools, how does this figure of $56,000 compare with what you are now granting the 15 schools? How much did they request?

Dr. KNUTSON. Well, their average is higher than was made available for each of the 15 schools. The request made by the 15 schools was negotiated and reduced.

Senator HILL. Could you supply for the record at this point how much each school requested and then how much each school got?

Dr. KNUTSON. Each school by name or the average for the schools?

Senator HILL. No. Each school by name and how much each school asked and how much you were able to grant each school?

Dr. KNUTSON. Yes, sir; we will be glad to do that.

Senator HILL. Then you could, of course, give the total requested by all 15; just add that up.

(The information referred to follows:)

TRAINING GRANT PROGRAMS, 1958

Dental health activities, Public Health Service

Institution	Amount requested	Amount awarded
Harvard University	$69,000	$32,400
Indiana University	48,000	23,004
Medical College of Virginia	49,554	35,000
Northwestern University	65,000	32,000
Ohio State University	35,000	31,797
Tufts University	45,269	[1] 0
University of Alabama	45,000	40,000
University of California	37,000	33,480
University of Illinois	59,271	27,000
University of Michigan	51,200	32,400
University of Minnesota	97,304	34,344
University of Pennsylvania	28,944	30,024
University of Pittsburgh	42,000	21,600
University of Rochester	75,000	35,000
University of Texas	29,000	16,200
Total	776,542	424,249

[1] 1957 award provided for continuation of the project in 1958 without additional funds.

INCREASE REQUESTED FOR OPERATION

Senator HILL. Now, how much of an increase did you request from the Department for your direct operations for 1959 fiscal year?

Dr. KNUTSON. The request from the Department?

Senator HILL. No; your request to the Department.

Dr. KNUTSON. Well, for our operations, total operations, we asked $250,000 more for the Institute and $185,000 for our technical assistance to the States program and $150,000 more for our Division of Dental Resources. In addition, a net increase of $892,000 was requested for grants.

Senator HILL. Now when you say "$250,000 for the Institute" what particular activity do you refer to there?

Dr. KNUTSON. That increase at the Institute would have been used largely for the genetic studies which I referred to earlier, and also for launching a more active program of the epidemiology and other diseases. Pyorrhea is becoming increasingly important with the aging population, because this is an affliction of adults and older people. We would also increase our studies in other fields.

FUNDS FOR DIVISION OF PUBLIC HEALTH

Senator HILL. What about the Division of Dental Public Health? What were your additional funds there?

Dr. KNUTSON. The Division of Dental Public Health would increase the activities which I referred to in the relationship to problems of the chronically ill, homebound, people who cannot get to the dental offices for dental treatment, and the problems of those with reference to which efforts are being made to rehabilitate them, problems of that kind.

Senator HILL. This includes the mentally retarded?

Dr. KNUTSON. It would include them.

Senator HILL. And those people who are confined?

Dr. KNUTSON. That is correct.

AUXILIARY PERSONNEL PROGRAM

Senator HILL. What about this increase in the auxiliary personnel program?

Dr. KNUTSON. Those increases in funds would be used to extend our efforts to promote broader use of auxiliary personnel in clinical dentistry. As I indicated, the anticipated increase in the population and the present capacity of dental schools for turning out dentists are at disparity. It is quite obvious we are going to be short of dentists and it becomes important then to maximize the amount of service each dentist can render. It has been demonstrated in some of our studies that a marked increase in the output of dental services by dentists can be effected by using auxiliary personnel efficiently.

Senator HILL. Well, we have a population increase of, I believe, about 3 million people this year. Of course that increase is among the infants and children on the one hand, and among the aged, on the other hand, and both of these groups present special problems; do they not?

Dr. KNUTSON. Special problems, particularly in the dental field because, in the younger group tooth decay is most active and in the older group pyorrhea, and related diseases are the major problems.

Senator HILL. Now, when you speak of auxiliary personnel, just give us what type of personnel you have in mind.

Dr. KNUTSON. Auxiliary personnel are better known perhaps as dental assistants and dental hygienists. The dental assistant is trained to work with the dentist just as a surgical nurse or surgery assistant works with the surgeon. The dentist, in his training in dental school, is trained to do all of this work himself, to work alone. An effort is now being made to train dental students while they are in dental schools, to use these auxiliary personnel to assist them at the dental chair in a way that increases their work capacity, makes their work easier and more efficient.

Senator HILL. Senator Smith, do you have any questions?

Senator SMITH. No.

Senator HILL. Doctor, we certainly want to thank you for your very interesting and informative testimony and I think we should also thank Mr. Seipert. He has problems, very definitely. We thank you too, sir.

ARTHRITIS AND METABOLIC DISEASE ACTIVITIES

STATEMENT OF DR. FLOYD S. DAFT, DIRECTOR, NATIONAL INSTITUTE OF ARTHRITIS AND METABOLIC DISEASES; ACCOMPANIED BY DR. JAMES A. SHANNON, DIRECTOR, NATIONAL INSTITUTES OF HEALTH; AND JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

"ARTHRITIS AND METABOLIC DISEASE ACTIVITIES

"[Arthritis and metabolic disease activities:] For expenses necessary to carry out the purposes of the Act relating to arthritis, rheumatism, and metabolic diseases [$20,385,000] *$20,592,000*."

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate	$20,385,000	$20,592,000	$21,092,000
Deductions:			
Comparative transfer to "General research and services, National Institutes of Health, Public Health Service"	−193,000	0	0
Unobligated balance, estimated savings	−33,000	0	0
Total obligations	20,159,000	20,592,000	21,092,000

Obligations by activities

Description	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Grants:						
(a) Research projects		$11,037,000		$11,137,000		$11,475,000
(b) Research fellowships		257,000		257,000		257,000
(c) Training		2,350,000		2,500,000		2,650,000
2. Direct operations:						
(a) Research	408	6,152,000	418	6,328,000	418	6,328,000
(b) Review and approval of grants	24	274,000	24	281,000	26	293,000
(c) Administration	12	89,000	12	89,000	12	89,000
Total obligations	444	20,159,000	454	20,592,000	456	21,092,000

Obligations by objects

Object classification	1958 appropriation	1959 budget estimate	1958 House allowance
Total number of permanent positions	444	454	456
Full-time equivalent of all other positions	4	5	5
Average number of all employees	418	[1] 426	[1] 428
Number of employees at end of year	455	[1] 458	[1] 460
01 Personal services	$2,751,100	$2,857,100	$2,867,100
02 Travel	87,900	91,900	91,900
03 Transportation of things	10,000	10,000	10,000
04 Communication services	27,200	29,200	29,200
06 Printing and reproduction	6,200	6,200	6,200
07 Other contractual services	181,900	181,900	181,900
Reimbursements to "National Institutes of Health management fund"	2,726,000	2,773,000	2,773,000
08 Supplies and materials	366,000	374,800	375,300
09 Equipment	239,100	244,400	245,300
11 Grants, subsidies, and contributions	13,631,000	13,881,000	14,369,000
Contribution to retirement fund	136,000	145,900	146,500
15 Taxes and assessments	9,500	9,500	9,500
Subtotal	20,171,900	20,064,900	21,104,900
Deduct quarters and subsistence charges	12,900	12,900	12,900
Total obligations	20,159,000	20,592,000	21,092,000

[1] Reduction in employment to absorb costs of scientists-engineer pay adjustment is not reflected in the 1959 President's budget, but shown in here since it is a mandatory item.

New positions requested, fiscal year 1959

	Grade	Annual salary
2 (a) Research:		
Scientist	GS-15	$11,610
Scientists (2)	GS-14	20,640
Statistician	GS-14	10,320
Scientists (2)	GS-13	17,980
Scientist	GS-12	7,570
Statistician	GS-12	7,570
Do	GS-11	6,390
Clerical assistant	GS-5	3,670
Total annual salaries		85,750
Less lapses		5,750
Net cost, permanent positions		(10) 80,000

Summary of changes

	Positions	Amount
1958 actual appropriation	444	$20,385,000
Transfers: Comparative transfer to "General research and services, NIH"		−193,000
Adjusted 1958 appropriation	444	20,192,000
Deduct nonrecurring costs:		
Estimated savings		−33,000
1959 base	444	20,159,000
1959 appropriation request	454	20,592,000
Net change requested	+10	+433,000

	1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount
Decreases:				
Reduction in new research projects to absorb indirect costs		$773,800		
Reduction in miscellaneous objects to absorb costs of annualization of retirement contributions		5,200		$5,200
Reduction in employment to absorb costs of scientists and engineers pay adjustment		[1] 49,000		[1] 49,000
Subtotal, decreases		828,000		54,200
Increases:				
For mandatory items:				
Retirement contributions:				
Annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)		3,500		3,500
Annualization costs for 16 additional positions authorized in 1958		27,700		27,700
Pay adjustment costs for scientists and engineers		[1] 49,000		[1] 49,000
Subtotal, mandatory increases		80,200		80,200
For program items:				
Amount necessary to support full indirect costs		773,800		
Research projects in physical biology		100,000		100,000
Research projects in gastroenterology				338,000
Training grants in physical biology		150,000		150,000
Training grants in gastroenterology				150,000
Cost of increased review and approval services			2	12,000
Direct research in physical biology	10	110,000	10	110,000
Net change in reimbursement to National Institutes of Health management fund		47,000		47,000
Subtotal, program increases	10	1,180,800	12	907,000
Total change requested	10	433,000	12	933,000

[1] Scientists-engineer pay adjustment is not reflected in the 1959 President's budget, but is included here since it is a mandatory item.

EFFECT OF HOUSE ACTION

Activity No. 1 (a)—Research projects

The House provided an increase of $338,000 for new research projects in gastroenterology. The full amount for research projects approved is an increase of $438,000 over the 1958 appropriation.

Activity No. 1 (c)—Training

The full amount requested of $2,500,000 was allowed by the House. In addition, $150,000 was provided for training grants in the broad field of gastroenterology, including peptic ulcer. The full amount approved for training is an increase of $300,000 over the 1958 appropriation.

Activity No. 2 (b)—Review and approval of grants

The House allowed the full amount of $281,000 and 24 positions requested, and an additional amount of $12,000 and 2 positions has been earmarked for clerical assistance for the increased grants program. This is a total increase of $19,000 over the 1958 appropriation.

PREPARED STATEMENT

Senator HILL. Doctor, we are happy to welcome you back to this committee. We are glad to have you with us again and we would be delighted to have you proceed in your own way.

Dr. DAFT. Thank you, Senator Hill. It is always a pleasure to appear before this committee.

I would like to submit this prepared statement and a paper on recent advances in research for the record, if I may.

Senator HILL. Those will be put in the record in full at this point.

(The statement referred to follows:)

STATEMENT BY DIRECTOR, NATIONAL INSTITUTE OF ARTHRITIS AND METABOLIC DISEASES

Mr. Chairman and members of the committee, the 1959 budget proposal for "Arthritis and metabolic disease activities" is $20,592,000.

Our present research attack on diabetes, arthritis, and other metabolic diseases may conveniently be considered in two parts: First, efforts to improve palliative or control measures; and second, fundamental biochemical and metabolic studies designed to furnish information on the cause of these disorders and to permit their eventual eradication through prevention and cure. A healthy balance between these two separate lines of attack is sought and, it is believed, has been attained.

In palliation, the notable developments of the past year include the extensive and fruitful evaluation of the therapeutic effectiveness of an oral drug against diabetes called tolbutamide or "Orinase"; the preliminary testing of additional compounds which lower blood sugar levels; and the enlargement of the armamentarium against the rheumatic diseases through the clinical trial of new steroids and other drugs, including antimalarial compounds.

In basic research, knowledge of the metabolism of sugars and fats and of many additional important biological substances has been greatly extended. Noteworthy progress in understanding of nucleic acids, basic structural units related to the viruses and the genes, has been achieved. Further information on galactose diabetes, or galactosemia, a so-called molecular disease, has been obtained; and the underlying metabolic defects in two additional molecular diseases—alcaptonuria and congenital nonhemolytic jaundice—have been discovered.

New areas of emphasis in this Institute include physical biology, biochemical, and biological studies with "germ-free" animals, and gastroenterology—including ulcerative colitis, regional ileitis, and peptic ulcer.

EFFECT OF HOUSE ACTION

The House provided an increase of $500,000 over the President's budget. This will be programed primarily in the grant activity. Of the increase $338,000 is for new research projects in gastroenterology; $150,000 for training in gastro-

enterology; and $12,000 for review and approval services for the increased grants programs.

Formal Statement

Mr. Chairman and members of the committee, for fiscal year 1959, the budget request for the National Institute of Arthritis and Metabolic Diseases totals $20,592,000, an increase of $207,000 over the appropriation for fiscal year 1958. This increase is to expand work in the field of physical biology through grants for research and training and through intramural research. The increased emphasis on this field of research represents a logical extension of program developments of recent years.

Since the National Institute of Arthritis and Metabolic Diseases was created in 1950, its more important developments have been—

(1) the initiation and expansion of a nationwide multidisciplinary attack on the problems of diabetes;

(2) the creation of a dynamic program of clinical and basic research and training in the rheumatic diseases;

(3) the evolution of a rapidly moving and highly-rewarding assault on basic problems of metabolism through fundamental studies in biochemistry, endocrinology, and related disciplines;

(4) the initiation of basic and clinical studies and of training in gastroenterology; and

(5) the expansion of a program in physical biology through grants for research and training and through small increases in intramural laboratory research.

Each of these developments has been made possible, in whole or in part, by the interest and support of the Congress. In particular, there has been provision of increased funds for diabetes research each year since 1954. In fiscal year 1957 funds were appropriated specifically for work in endocrinology and related basic studies, and in fiscal year 1958 funds were similarly made available for gastroenterology and physical biology.

Succeeding sections of this report will discuss in greater detail the program evolution in each of these areas, as well as the changes in emphasis which have been made in order to take advantage of new concepts and new techniques. In addition, there will be presented a few of the many advances in knowledge resulting from the appropriations of the Congress to this Institute.

HISTORICAL: EVOLUTION OF THE INSTITUTE

Established in 1950 under the provisions of Public Law 692, the National Institute of Arthritis and Metabolic Diseases received its first direct appropriation in 1952. For many years prior to 1950, laboratories which now constitute a part of this Institute were concerned with basic studies in chemistry, pathology, pharmacology, physiology, and nutrition. In 1947, they were grouped together into a division known as the Experimental Biology and Medicine Institute. These laboratories over the years of their existence have had an outstanding record of accomplishment in fundamental research. They have contributed important information on the structure of sugar molecules, developed new painkilling compounds, carried out some of the earliest work on the action of the sulfonamides, particularly against pneumococci, and made basic observations of the widespread deficiency disease pellagra, leading to its virtual elimination as a health hazard in this country.

New research areas.—A trend toward the study of the functions and modes of action of cellular components as a means of understanding body processes in health and disease began some years ago with the creation of a unit to carry out research on enzymes. Since that time, the study of chemical reactions in cells and of the enzymes catalyzing these reactions—an extensive field known as intermediary metabolism—has attained greatly increased importance both at Bethesda and in the scientific world in general. The old chemistry laboratories of this Institute now have joined this trend and are shifting their major interest from the structure of carbohydrates and analgesics to the metabolism of various compounds in the body and to the chemical reactions of the products of metabolic change—the so-called metabolites.

In addition to the evolution of the nonclinical research laboratories, another major change has been brought about by the opening of the Clinical Center. Problems having a direct bearing on clinical medicine have been undertaken, especially as they are related to diabetes, arthritis, and other diseases of connective tissue,

diseases of the thyroid, pituitary, and other endocrine glands, disorders of the blood and blood-forming organs, and various other metabolic diseases, such as the familial diseases of childhood.

One of the principal effects of the introduction of clinical investigation, aided by the expansion of intermediary metabolism, has been to provide an opportunity for cross-fertilization of ideas between basic scientist and clinical investigator. Their close collaboration has already resulted in elucidation of the cause and development of means of alleviation of certain diseases of probable genetic origin—so-called molecular diseases. This will be discussed at greater length in another section of this report.

Grants programs broadened.—The extramural programs of this Institute, which include grants for research projects, research fellowships, and training grants have also experiencerd major changes since their inception. With the establishment of the Institute, a focal point was for the first time provided for a nationwide attack on a wide variety of disease entities, including diabetes, arthritis and other rheumatic diseases, endocrine disorders, liver diseases, nutritional deficiencies, blood disorders, and other related ailments. The initial effort was directed in great measure toward stimulation of interest in the various arthritides. As increased funds permitted expansion into other areas of its responsibility, the Institute extended its support for research and training to diabetes and other metabolic diseases (subsequently, also, to gastroenterology and physical biology). From very small beginnings in 1950, these programs have grown to the point where they represent a vital and effective force in furthering the conquest of the diseases for which this Institute has categorical responsibility.

RECENT TRENDS AND DEVELOPMENTS

Physical biology.—During the past generation, the application of chemistry to biological and medical problems led to the development of a completely new approach, biochemistry, which has developed to a fine point and provided answers to many formerly insoluble problems.

But many problems remain, and underlying many of these are physical forces which to date have been only superficially explored with what are, apparently, inadequate techniques.

There is general agreement that the application of the techniques of modern physics to medical and biological problems will provide the answers to what now appear to be insoluble problems, and that the next generation will see results comparable to the great contributions of chemistry in the immediate past.

Anticipating rapid and significant developments in this field of biophysics, the Institute, supported in this view by the Congress, has during the past year moved to expand and broaden its operations in this relatively new and fertile field of exploration. The techniques of the physicist are being increasingly brought to bear upon a growing number of natural phenomena. And, in conjunction with this development, the techniques and skills of the mathematician, too, are being tooled up for application. In the past the basic science of mathematics has not been fully utilized in solving biological problems. A section of mathematics now has been set up in the Institute, and this section will provide leadership in the application of creative mathematical techniques to biological problems.

In the development of the field of physical biology there has been progress not only at Bethesda, but throughout the Nation as well, due in large part to Federal support. New studies of various aspects of physical biology have been undertaken under National Institute of Arthritis and Metabolic Diseases research grants. Also, because of the lack of qualified investigators in this new field, particular emphasis is being placed on training.

Gastroenterology.—Increases in the 1958 budget made it possible to undertake support of a number of new research projects in various aspects of gastroenterology, with particular emphasis on fundamental studies in physiology, biochemistry, and pathology as potentially to the most fruitful approach to ultimate relief for the thousands suffering from such poorly understood afflictions as ulcerative colitis, peptic ulcer, and regional ileitis. Here, again, training has not been neglected. Funds provided by the Congress have made it possible to provide for the training of young clinicians, as well as advanced training for physicians, in gastroenterology as well as in the traditional areas of arthritis, diabetes, and other metabolic diseases. Development of additional skilled personnel in all of these areas, several of them too long neglected, is considered to be potentially most rewarding and of vital importance to future developments in these fields.

Sound information concerning the prevalence of ulcerative colitis, regional ileitis, and peptic ulcer awaits extensive and detailed study, but it is estimated that 10 percent of the world's population have, will have, or have had an active peptic ulcer. Physicians are just realizing that the commonest cause of rectal bleeding in children over 2 years of age is ulcerative colitis. Expenditures by the Institute in research and in training grants in gastroenterology studies increased by some $750,000 in 1958 and this level will be continued within the 1959 budget before you. An encouraging advance in peptic ulcer research has been made during the past year: In basic physiological studies on the motility of the gastrointestinal tract and the production of pain, it has been found that excess motility of the tract, in addition to the overproduction of acid, is the important factor affecting the production of the ulcer and the subsequent pain. New drugs are being developed and tested to reduce hypermotility and are proving effective.

Germ-free animals.—Experimental animals may be born and reared in a germ-free state through the use of new techniques and very specialized equipment developed at the University of Notre Dame. The availability of such germ-free animals now is making possible investigations which heretofore could not be attempted, endeavors which may yield answers to riddles which have long remained unsolved. At the present time studies are in progress on the influence of intestinal bacteria on nutrition and on a variety of metabolic processes.

DIABETES

Diabetes is probably the best known and most important of the metabolic diseases. The diabetic patient is unable to utilize sugar properly, either because of decreased production of insulin, the principal hormone of the pancreas, or because of interference with its action.

Approximately 25,000 people die each year of diabetes while another 25,000 die of complications associated with the disease. About 2 mililon persons in the United States suffer from it. Diabetes has an insidious onset, is hereditary in nature, and afflicts people of all ages. It cannot be cured. In the past it has been possible to control the high blood sugar moderately well in many patients with insulin injections, but this method of management is far from ideal.

Research attack.—The Institute is at work in two principal directions to deal more effectively with diabetes. Efforts are being exerted toward obtaining smoother, better tolerated means of controlling the clinical disease, as exemplified by study of the oral drugs; and the search is being pushed for fundamental information on the disease process and on the action of insulin, in the belief that ultimate success in dealing with diabetes depends on detailed understanding of the basic body processes for making use of all vital food substances, not just sugars. and of how these processes are deranged in the diabetic patient.

To accomplish this task, the grants program has been invaluable and the growth of interest in this important field, as shown by awards for both research and training, has been most heartening. The intramural research program is carrying on in the laboratory many projects which are providing basic information concerning carbohydrate and fat metabolism and the structure and action of insulin and related hormones. This effort is aided greatly by the fact that the Scientific Director of the National Institute of Arthritis and Metabolic Diseases, Dr. DeWitt Stetten, Jr., is one of the world's foremost carbohydrate and enzyme biochemists; his outstanding work on glycogen, the principal storehouse compound of the body for sugar, for which he received the Banting award of the American Diabetes Association, will be described.

The clinical investigations program on diabetes in the Clinical Center has been proceeding on a modest scale. Relatively intense and careful study has been given to small groups of patients with special problems. Work has recently revealed the presence of substances which are antagonistic to insulin and its action in the blood of diabetic patients who represent difficult management problems. This past year a detailed study was completed which corrected a long-prevalent notion and indicated that the peripheral nerve complications of diabetes could not be laid to abnormal metabolism of the B vitamins.

The clinical problem—Oral drugs.—The search for better means of controlling diabetes and its symptoms is being pressed forward. Just 2 years ago it was reported that new drugs had been found which had potent blood-sugar-lowering action when taken by mouth. The first of these drugs, carbutamide (BZ–55) was soon found to be toxic and was withdrawn. The second, tolbutamide (Orinase) has appeared to be virtually nontoxic and is being widely used.

Bitter experience in the past, however, with compounds which have seemed initially to be both safe and effective but have proven to be toxic and ultimately useless on long-term observation, makes thorough investigation necessary. The Institute is supporting clinical observations of the long-term effects of Orinase in numerous patients as well as laboratory studies of its toxicology and mode of action.

It is important to determine whether Orinase possesses or in some way enhances certain of the key actions of insulin; if it does not, then the lowering of blood sugar by Orinase probably does not really help the diabetic to make proper use of essential food elements. In addition, questions concerning the possibility of damaging effects from long-term action of Orinase on various organs, such as the liver, and on hormone systems and enzymatic processes which regulate the metabolism of sugars, must be settled before it can be safely stated that Orinase is a significantly valuable compound for improving control over this important and widespread disease.

During the past year investigators in the Institute have devised a technique of administering Orinase intravenously which is expected to be widely useful in helping to determine the mechanism of Orinase action and comparing it directly with that of insulin. Clinical studies using this new technique, supported by in vitro tissue work, indicate that Orinase interferes in some way with the output of glucose by the liver and strongly suggest that Orinase does not act primarily by enhancing the peripheral action of endogenous insulin.

Various research centers, supported in large part by Institute grants, are investigating other suggested actions of Orinase, including the inhibition of insulinase, the enzyme which inactivates insulin, and interference with the production or action of glucagon, a pancreatic hormone which favors the release of glucose from its storage depots. Particular attention has been centered on the idea that Orinase stimulates the insulin-producing cells of the pancreatic islets, and findings of Institute grantees favor this concept. If this mechanism is the correct one and if long-continued stimulation of the pancreatic cells does no ultimate harm, then it would probably follow that Orinase or similar compounds might have a definite place in diabetes therapy. Much evidence contradicting this point of view has been presented, however. As a result, the conclusion at this time is that the mode of action of Orinase is not with certainty known and that it is not yet clear that diabetics are deriving actual physiological benefit from its use.

In addition to the work on Orinase, Institute grantees are testing a newer oral hypoglycemic agent DBI, a compound throught to be effective in lowering the blood sugar in some patients who do not respond to Orinase, such as juvenile diabetics. Manifestations of toxicity, or side effects, are said to occur in a relatively high proportion of patients. It is as yet much too early to evaluate the possible usefulness of this drug.

Metabolic problems—Basic studies.—Diabetes is a complex disorder which, although manifested by abnormal levels of glucose in the blood and by spillage of sugar in the urine, actually involves alterations in many metabolic processes. For this reason investigations must be pursued in many areas of metabolism in an effort to characterize precisely the various biochemical derangements in this disease. Since incomplete breakdown of fats occurs during certain phases of diabetes, the metabolism not only of sugars but also of fats must come under scrutiny. Studies are also concerned with the structure and function of insulin and, because of multiple interrelationships, the biochemistry and metabolism of other regulators, especially the hormones of the pituitary and adrenal glands, must be carefully investigated. A few examples of these basic studies will be cited.

Sugar metabolism.—Sugar is stored in the body in the form of glycogen, principally in the liver and in the muscles. Recent studies at the Institute have revealed the remarkable suitability of glycogen for its sugar storage function by disclosing its dynamically varying metabolic activity and the constantly changing size of its individual molecules. The studies indicate that individual glucose units or residues are being added to or separated from parent glycogen molecules in an almost never-ending process, some molecules growing while others are shrinking, so that the glycogen molecule in the living animal is never finished. Glucose molecules can be readily deposited when available or quickly mobilized for energy production when needed.

Work is continuing in a variety of 5-carbon sugars, the pentoses, because of the demonstration that they participate as actively in biochemical processes as do the more familiar 6-carbon sugars, the hexoses.

Fat metabolism in experimental diabetes.—In other intramural studies the close association of disturbances in fat metabolism with alterations in carbohydrate metabolism have been demonstrated in an experimental study of rats made diabetic by total removal of the pancreas. Development of diabetic ketoacidosis occurred, simultaneously with blood sugar elevation, within 2 hours after the pancreas was removed. Administration of insulin corrected these indications of altered fat metabolism at a rate similar to the reduction in blood sugar, yet other observations showed that the fat disturbance is not due entirely to insulin lack. This study is being extended to inquire into the influence on ketosis of a variety of factors known to have various effects on diabetes, such as administration of fats, starvation, pregnancy, and the growth hormone of the pituitary.

Blood level of circulating insulin.—Arduous effort over several years has gone into the development of a sensitive and reliable assay of the circulating blood levels of insulin. With adequate sensitivity such an assay would be extremely valuable for a wide variety of studies of influences on insulin production or inhibition. With the view of stimulation of effort and exchange of ideas on this difficult problem, the Institute in May 1957, assembled at Bethesda an international conference of the 50 most active diabetes investigators in the world, including a number of grantees. The conference revealed that extensive advances had been made in the development of insulin assay techniques, including a new, more immunologic method which promises to provide a means of measuring true insulin concentration in the blood, in contrast to other methods which indicate the aggregate action of insulin and other hormonal factors influencing glucose utilization.

Action of insulin.—Substantial support for the idea that a principal site, if not the most important site, of insulin action lies in the transport of sugars across cell membranes in muscle has been provided by work supported by an Institute research grant. The mechanism of transport is not simple diffusion, but appears to involve combination of the sugar with a molecular constituent of the cell membrane. It was shown that not only glucose and galactose but other important sugars moved rapidly into muscle cells under the influence of insulin. As a result of this work it is now possible to say that there is no qualitative difference in the insulin response of heart, diaphragm, and skeletal muscle.

RHEUMATIC DISEASES

The rheumatic diseases constitute a large family of related disorders which are characterized by pain and stiffness in joints and muscles, often resulting in swelling and inflammation in affected areas. For the most part they are not fatal, although one group, the collagen diseases, often are. The best known and most vicious of these disorders is rheumatoid arthritis, which is responsible for much of the disability and crippling resulting from rheumatic disease. Other members of this disease family include osteoarthritis, gout, rheumatic fever, nonarticular rheumatism (fibrositis, neuritis, bursitis), and the collagen diseases, such as scleroderma, lupus erythematosus, and periarteritis nodosa. These diseases afflict approximately 10 million people in the United States and are a major cause of disability and crippling.

Advances on many fronts of the research attack on the rheumatic diseases have been recorded during the past year which augur well for those who suffer the ravages of these painful and crippling disorders. Chemists, physiologists, pathologists, epidemiologists, biochemists, physicists, and even mathematicians, are joined in a concerted effort to win this battle in the shortest possible time. Noted below are a few examples of the many forward steps accomplished.

New diagnostic test.—A new, comparatively simple and accurate serological test for rheumatoid arthritis has been developed by National Institute of Arthritis and Metabolic Diseases scientists, working in collaboration with colleagues in the National Institute of Allergy and Infectious Diseases. This test, known as the Bentonite flocculation test (BFT), has a number of advantages over older tests.

Because of its comparative simplicity, the BFT may become the first of such diagnostic tests to be widely used by physicians. The speed with which it produces results is also an important factor in making it more practical to use, for an answer is available in minutes rather than in hours or days.

In related work, an attempt is being made to isolate and characterize the substance known as the rheumatoid factor, which is found in the blood of persons with rheumatoid arthritis and which is the activating factor in all serological tests for the disease. Seeking this objective, an Institute scientist has de-

veloped a precise quantitative method for measuring the activity of the factor which has a margin for error of only 5 percent, whereas previous methods varied in error from 100 to 200 percent.

New drugs evaluated.—In previous years, results with two potent antirheumatic agents have been reported—prednisone and prednisolone. Along with a continued long-term study of these compounds, a number of active new drugs have been evaluated in the past year. These studies have been carried out both by Institute grantees and by investigators at Bethesda. Among the new drugs tested were triamcinolone (a modification of prednisone) and several other new steroids; an antimalarial compound called chloroquine; and two derivatives of another type of antirheumatic drug, phenylbutazone. It has been found that while prednisone and prednisolone are effective antirheumatics, in some cases serious side effects are a hazard in long-term use. Triamcinolone was found to have approximately the same antirheumatic potency as prednisone and, apparently, few advantages; the other steroid compounds tested had the same limitations as prednisone without some of the advantages. One of the phenylbutazone derivatives on limited trial has provided moderate objective and subjective improvements in patients while the other produced no effect. Results obtained with chloroquine are not at this time of such nature as to permit final evaluation.

More learned about gout.—Overproduction of uric acid has now been clearly and consistently demonstrated to be the effective metabolic defect of primary gout in work started at Bethesda and extended both at the Institute and in grantee institutions.

Detection by an Institute grantee of a purine metabolite in the urine which increases in amount during attacks of gouty arthritis constitutes the first indication of a specific link between the clinical and metabolic features of this disorder.

Colchicine administered orally has for many hundreds of years been used in the treatment of gout and is still perhaps the most effective agent in common use, but most persons were found to be susceptible to extremely distressing gastrointestinal effects brought on by it. These effects limited its usefulness. A systematic evaluation of intravenously administered colchicine recently conducted at the Institute has revealed that no lasting or serious side effects were encountered, and that the intravenous injection of the drug produced relief of the acute gouty attack more promptly and with fewer gastrointestinal symptoms than orally administered colchicine.

Susceptibility to osteoarthritis investigated.—Very little is known about the cause, predisposing factors, or even the course of osteoarthritis, but a detailed study of a group of intermarried families having a high prevalence of osteoarthritis, still incomplete, has contributed information which confirms findings in animal studies to the effect that (1) susceptibility to osteoarthritis is genetically transmitted, and (2) in those with inherited susceptibility, obesity contributes significantly to the occurrence of the disorder.

Genetic trait noted in rheumatoid arthritis.—Evidence indicating that there is a genetic or familial trait in rheumatoid arthritis has been accumulating recently. Reports from this country and abroad indicate that on the basis of reactions to the sheep cell agglutination test for rheumatoid arthritis, members of the families of arthritics, even though they have no symptoms of the disease themselves, reflect a higher rate of positive reactions than do normal controls.

METABOLISM: MOLECULAR DISEASES

Major medical advances in the diagnosis and treatment of disease have in the past come relatively slowly and have in many instances stemmed from empiricists who depended largely upon observation and experience rather than upon scientific experience. We are now well into a period which is exemplified by the recognition that an understanding of the basic chemical and biochemical reactions which occur in the cells of the body in health and disease is an absolute necessity before we can hope to solve the difficult problems of successful treatment and prevention of the chronic metabolic diseases. This period is further exemplified by the exploration of synthetic compounds whose design is based upon secure chemical, pharmacological, and physiological information, and by the use of such compounds in the treatment of disease. The talents of the biochemist, synthetic chemist, the physiologist, the microbiologist, and the pharmacologist are being and must continue to be applied with increasing intensity to the problems of the physician. Additionally, it must be recognized, a new era has begun in which the techniques and the talents modernly developed

in the fields of physics and mathematics are to be applied to medical research problems.

An entirely new concept of molecular diseases has arisen in the past few years, resulting from important advances in biochemical knowledge and techniques. Certain hereditary metabolic disorders have now been characterized as due to the partial or total lack of a specific enzyme necessary for catalysis of a vital metabolic process. In the absence or ineffective action of this process, death in infancy or early serious disease results. The term "molecular" arises from the fact that enzymes, missing or deficient in those diseases have definite reproducible protein molecular structure. As with all proteins, the production of these enzymes is under genetic control, hence the hereditary nature of these disorders. It is not inconceivable that as science digs deeper and deeper into the metabolic processes of various diseases, more and more of them will be disclosed to be molecular in origin.

Our findings concerning one of these diseases, galactosemia, were described 2 years ago. Since then, important additional information has been obtained regarding this milk sugar disorder and two more diseases, alcaptonuria and congenital nonhemolytic jaundice, can be added to the list.

Galactosemia.—In 1955, Institute scientists reported discovery of the cause of, and development of a safe and relatively simple diagnostic test for a molecular disease known as galactosemia, in which the absence of a single enzyme made it impossible for the afflicted infant to properly digest one of the sugars in milk, bringing about a toxic condition which could lead, if not promptly diagnosed, to serious complications involving jaundice, mental retardation, and early death.

Further work has unearthed an explanation for the fact that patients with galactosemia, while still lacking the essential enzyme, show an increased ability to tolerate milk as they advance in age. A second enzymatic pathway for the breakdown of milk sugar has been found. The enzyme involved is very feeble in early life but later increases in activity, which explains the clinical observation that patients can tolerate milk better as they grow older.

Alcaptonuria.—Great potential significance is attached to the recent finding by Institute scientists of the cause of alcaptonuria, a rare disease often accompanied by a form of arthritis. Although persons with this disease are born with the basic defect in their metabolism, the disorder, during the first two decades of life is distinguished only by the presence in urine and perspiration of a substance which turns brown or brownish black upon exposure to air. This disease, it has now been shown, is caused by the absence or ineffectiveness of a single enzyme which is called homogentisic acid oxidase.

In addition to the importance of the discovery of the cause of the basic disorder, significance is attached to the possibility that this finding may provide, through its demonstrated relationship, guidance in the search for the cause of other types of arthritis.

Congenital nonhemolytic jaundice.—During the past year, a third "molecular" disease has been characterized by the demonstration of a deficiency in an enzyme needed for an important biochemical process. By means of a well-planned combination of laboratory, animal, and clinical studies, intramural investigators have demonstrated that congenital nonhemolytic jaundice is due to the lack of a specific enezyme needed to convert a constituent of bile called bilirubin into the form in which it can be excreted.

Nucleic acids.—Within the past few decades, great strides have been made in the elucidation of the structure of a difficult and important group of biological compounds, the proteins. The importance of this advance is well recognized, particularly since proteins make up the whole or a part of such essential substances as hormones, enzymes, and antibodies.

A more difficult and perhaps even more important field is represented by the nucleic acids. Here, we approach the secrets of the viruses, of heredity, and perhaps of life itself. In very recent years research workers throughout the world, including grantees and intramural investigators of the Institute, have made a significant beginning in determining the structure and mode of synthesis by the body of nucleic acids.

Last year was reported to you the first synthesis of nucleic acids by enzymes isolated from living cells. This work has since then been extended to other types of nucleic acid and to other enzyme systems. In addition, some understanding has been gained of the methods by which the body controls the synthesis of these compounds.

Identification of factor protective against dietary liver necrosis.—An extensive study of experimental liver necrosis in animals culminated this year in identification of the active component of factor 3, the dietary substance which prevents a variety of fatal deficiency disorders in rats, mice, and chicks. The essential ingredient was found to be the element, selenium. This material and two other factors, the amino acid cystine and vitamin E, each protect against the multiple deficiency disease, but selenium is much more effective than either cystine or vitamin E. The studies indicate that selenium is an essential trace element, probably acting as a catalyst in an essential metabolic process necessary for viability of the liver and of other organs.

Many additional examples of research advances might be cited. These few, however, are illustrative and others will be discussed under "Research highlights."

CONCLUSIONS

There has been presented a very brief résumé of the work of our Institute in its laboratories and clinical facilities and of the stimulation, through grants, of research studies and training programs in the many medical and research institutions throughout the country. The interest and support which this committee has evidenced in each succeeding year since its inception has enabled the National Institute of Arthritis and Metabolic Diseases to assume the leadership you have intended in the search for knowledge into the cause, prevention, and cure of some of the most baffling diseases of mankind.

Since these efforts involve, to a great extent, the association of members of the scientific and medical profession in working together for the common weal and because we appreciate so very strongly the necessity for mutual costimulation of the Government scientist and his colleague in the great teaching universities and nongovernmental research institutions of this country, this report will close with brief reference to the constant exchange of scientific and medical talent between our Institute and these universities and hospitals. Of course the majority of our investigators reach us from university and hospital sources. But our particular pride is that these young men, after 2 or 3 years with us, are in constant demand for places of leadership and responsibility in the top-flight medical schools and universities in this country. Several of our men return each year to enrich the staffing of these great institutions. Rather than feeling a constant sense of loss we take increasing satisfaction in the two-way channel which has been established, and great pride that the value of our environment and the quality of research conducted at the National Institutes of Health is recognized to the fullest extent by the scientific and teaching world.

EFFECT OF HOUSE ACTION

The House provided an increase of $500,000 over the President's budget. This will be programed primarily in the grants activity. Of the increase $338,000 is for new research projects in gastroenterology; $150,000 for training grants in the broad field of gastroenterology, including peptic ulcer; and $12,000 for review and approval services for the increased grants programs.

Recent Advances in Research on Arthritis and Metabolic Diseases, January–March 1958

ITEMS OF INTEREST ON PROGRAM DEVELOPMENTS AND RESEARCH STUDIES CONDUCTED AND SUPPORTED BY THE NATIONAL INSTITUTE OF ARTHRITIS AND METABOLIC DISEASES

New treatment for deadly postburn infections

A new treatment for deadly postburn infections which is 17,000 times more powerful than gamma globulin was reported recently by Dr. R. Carl Millican and John D. Rust of the Institute. The treatment has proved successful in animals, but has yet to be tested in humans.

The new development is a further extension of the postburn infection research which NIAMD scientists reported. At that time, gamma globulin, the blood serum fraction that contains antibodies, appeared to be the most effective treatment. Its use in human burn cases is now undergoing clinical trials in Lima, Peru.

Both the gamma globulin treatment and the new one were developed to counteract overwhelming infections caused by *Pseudomonas aeruginosa*, a microorganism that is resistant to all commonly used antibiotics. Burn victims sometimes die from this type of infection. They appear to recover from the shock period im-

mediately following a severe burn, only to succumb to the bacterial infection within several days.

Earlier NIAMD laboratory findings suggested that the best way to fight this infection was to bolster the body's own defenses with injections of gamma globulin. Further laboratory studies, using mice which have been experimentally infected with lethal doses of Pseudomonas organisms, show that an antisera from immune animals gives significantly greater protection than gamma globulin.

The antisera is prepared in rabbits by injecting them with live Pseudomonas and then allowing specific antibodies against the organism to build up in their blood serum. These rabbit antibodies are then removed and used to counteract the infections in the mice.

The NIAMD investigators found the antisera to be extremely potent, on the order of 17,000 times more powerful than gamma globulin alone.

This tremendous increase in potency of immune serum is not too surprising. Normal gamma globulin obtained from pooled blood contains some antibodies to Pseudomonas, since the organisms are continually present in the gastrointestinal tract and thus bring about a low level of self-immunization. The organisms cause infection only when the general body resistance is lowered, as it is in post-burn cases.

The amount of antibody developed by natural exposure, however, is far lower than that produced by the body when it is specifically challenged by injections of the organism.

One important advantage of the antisera, the NIAMD investigators found, is that it is still effective even when given after the organisms have invaded the blood stream and caused septicemia.

Study shows liver affects insulin supply

Studies of animal livers that have been kept alive outside the body indicate that this organ may be degrading a considerable amount of the body's insulin supply before it is able to reach the tissues that need it. This has been found by Drs. Glenn E. Mortimore, Frank Tietze, and DeWitt Stetten, Jr., of the Institute.

The liver's effect on insulin has interested researchers studying diabetes because of the organ's stategic position in the body. All the insulin produced by the pancreas must first pass through the liver before being circulated in the body via the blood stream, and any degradation of the hormone by the liver could have a decided effect on the overall diabetic state.

Insulin is vitally needed for normal sugar metabolism, and diabetes can occur if there is either too low an output of insulin by the pancreas or if too much insulin is inhibited or destroyed somewhere in the body.

It has been known that slices of liver tissue as well as ground-up liver cells are able to degrade rapidly or partially destroy and inactivate insulin, but until now there has been little information about the total amount of degradation that may be occurring in the intact liver.

To study this, the NIAMD scientists use a technique known as organ perfusion, in which the liver of a healthy rat is isolated from its normal source of blood and supplied with a steady flow of fresh rat blood from a special perfusion apparatus. In this apparatus, the blood is oxygenated, much as it would be in the lungs, before being pumped through the liver. Once inside the organ, the blood gives up its oxygen to the tissues and is then pumped back to the apparatus for more oxygen.

Into this closed circulatory system, the scientists injected insulin that had been tagged with radioactive iodine, and measured both the amount going into the liver and the amount coming out to be recirculated.

The NIAMD investigators found that in one passage of blood around the circuit, approximately 22 percent of the radioactive insulin disappeared from the blood, indicating that this amount of the hormone was being held by the liver. No fragments of the original insulin molecules were immediately present in the blood from the liver during the first cycle, but in subsequent cycles increasing amounts of the degraded insulin began to appear.

The biological significance of this insulin binding and degradation by the liver is not yet known. Other studies are being designed to provide more information about this process and its possible role in the metabolism of sugar in both the normal and diabetic person.

Explain thrombin's action in blood clotting

Discovery by scientists at the Institute of how thrombin, the body's essential blood-clotting enzyme, does it work sheds new light on hemophilia and other puzzling blood disorders.

Blood clotting is a complex process involving a series of biochemical steps, each dependent on a previous one. Before clotting can take place, blood platelets have to rupture and release certain factors. These, in turn, act on prothrombin in the blood and convert it into its active form, the enzyme thrombin. Without thrombin, no clotting can take place.

Once active thrombin is formed, it brings about the last step in the clotting process, conversion of fibrinogen into fibrin, the gelatinous substance that actually forms the clot. How it does this has not been fully understood until now.

Drs. Koloman Laki and Jules A. Gladner of the Laboratory of Physical Biology, have found the "active site" on the thrombin molecule that is responsible for its action, and have discovered how the enzyme (thrombin) operates to change fibrinogen to fibrin. They reported their findings in the Journal of the American Chemical Society.

The researchers found that thrombin acts on fibrinogen by chopping off the ends of the fibrinogen molecules. These ends carry negative charges. Thus, while they are attached, the molecules repel each other and will not form clots. But when thrombin is present, the ends split off, the charge is eliminated, and the fibrinogen molecules clump together as fibrin, forming the clot. Now, for the first time, the specific peptide bonds which are split by thrombin to remove these fragments have been determined.

Working in cooperation with Drs. David R. Kominz, Laboratory of Physical Biology, and J. E. Folk, National Institute of Dental Research, the investigators were able to inactivate the thrombin with a nerve gas compound made radioactive for tracing. Each molecule of thrombin was inactivated by one molecule of the poison, which always attached itself to the same spot, the active site, on the thrombin molecule.

The NIAMD investigators also found that the thrombin molecule may be much smaller than previously estimated, having a molecular weight of approximately 14,000. This is only two-thirds as large as trypsin and chymotrypsin, both digestive enzymes.

A surprising finding was that the grouping of amino acids at the active site of the thrombin molecule was the same grouping that has been found at the active sites of the three other enzymes, trypsin, chymotripsin, and phosphoglucomutase. This reveals a remarkable uniformity in nature, and considerably extends knowledge, on a molecular level, of how these biological catalysts operate in the body.

Use of packed red cells advocated

NIAMD-supported investigators have studied the results of exchange transfusions with packed red blood cells in comparison with use of whole blood in the treatment of Rh-incompatible hemolytic disease of the newborn. Prompt correction of anemia and lack of accentuation of the high blood concentration of bile pigments were observed as distinct advantages of packed erythrocytes over whole blood.

Erythroblastosis, which occurs approximately once in each 1,000 births, results most frequently from the development of Rh-antibodies in an Rh-negative mother. The antibodies seep through the placenta, become attached to the Rh-positive red cells of the infant, and destroy them by hemolysis. If the antibodies and affected red cells are not promptly removed and blood given shortly after birth, the child may die with extensive edema and anemia. If the baby survives, heavy staining of brain tissue with the bile pigments from hemolyzed cells results in serious brain damage and mental retardation.

In an effort to improve the exchange transfusion treatment of erythroblastosis, or hemolytic disease of the newborn, grantees of the National Institute of Arthritis and Metabolic Diseases have made a comparative study of the effects of whole blood versus sedimented or packed red cells (erythrocytes) in the transfusion procedure for replacing the affected infant's blood cells. In the study, attention was centered on effects on the anemia and elevated bile pigment levels in the blood. Advantages of sedimented red cells over whole blood were described in the report by Dr. Thomas R. C. Sisson, Lorraine Whalen, and Amalia Telek of the University of Rochester School of Medicine in the journal Pediatrics.

The MIAMD-supported investigators studied two groups of infants with maternal-fetal Rh-incompatibility during the first and second days of life. Both

procedures brought about removal of affected erythrocytes, as well as excess bilirubin in the serum and the circulating antibodies responsible for the disorder. Transfusion of sedimented red cells also promptly corrected the anemia accompanying the disease, a favorable effect not immediately provided by whole blood.

An additional value of packed cells was noted by Dr. Sisson and his associates in that the rise in bile pigment blood concentration after cell transfusion was much less than following whole blood. Other investigators have advocated the large volumes of whole blood transfusion as useful for draining bilirubin from the extravascular tissues. The NIAMD grantees, however, feel that the small volumes administered with packed red cells, by removing tissue-linked pigment more slowly, send less of the potentially demanding bile to the brain and immature liver. Since mechanisms of bile excretion are probably poorly developed at this early stage of life, it may be useful to keep the bile pigments temporarily in the tissues until their excretory pathways have been improved.

Study explains thyroid findings in pregnancy

In pregnant women, the concentration of thyroxine binding protein increases two and a half times over its normal value. This probably explains why pregnant women are not truly hyperthyroid, although the protein-bound iodine level of their blood serum is increased.

An explanation for the paradoxical finding that pregnant women are not hyperthyroid, even thought they show a high level of protein-bound iodine (PBI), has been provided by a clinical study of thyroid function during pregnancy.

Dr. Jacob Robbins, of the Institute's Clinical Endocrinology Branch, in collaboration with Dr. James H. Nelson, Division of Obstetrics, District of Columbia General Hospital, Washington, D. C., reported in The Journal of Clinical Investigation that the concentration of thyroxine-binding protein (TBP) increases during pregnancy to about two and half times its normal value. The investigators found that the concentration of TBP rises in the early weeks of pregnancy and remains high throughout pregnancy, returning to its original level 6 weeks post partum.

TBP is a specific alpha globulin in blood serum which has a high affinity for thyroxine, the thyroid hormone. It binds the thyroxine molecules and serves to carry them throughout the body via the blood serum. When more TBP is available, more thyroxine can be bound.

As the binding protein increases during pregnancy, if the PBI (which is chiefly thyroxine) did not also rise, the amount of free or unbound thyroxine (which influences the level of cellular metabolism) would be low. The increase in PBI which does occur, however, results in a free thyroxine level in the normal range. These findings, the investigators believe, further support the theory that it is the free thyroxine level, rather than the total thyroxine level, that determines a person's thyroid status.

The rise in basal metabolic rate (BMR) during pregnancy begins to occur later than the rise in PBI, seems to be unrelated to the mother's thyroid function, and probably reflects primarily addition of the rapidly metabolizing tissue of the growing fetus.

Rate of bone healing studied with new technique

Investigations supported by NIAMD and NIDR research grants have resulted in the development of a method for evaluating quantitatively the rate of fracture healing in the living animal. This isotopic procedure, indicating uptake of mineral in the fracture site, will be useful for many studies of suggested methods to improve healing after bone injuries.

A new technique devised for experimental study of the healing process following bone fracture has been devised by Drs. J. H. Heller, H. Konig, and L. Fox of the New England Institute for Medical Research, Ridgefield, Conn. The new in vivo method, involving measurement of the bone uptake of radioactive strontium in rats with experimental bone lesions, has been reported in Surgery, Gynecology and Obstetrics. The research studies are supported by grants from the National Institute of Arthritis and Metalbolic Diseases and the National Institute of Dental Research.

The new technique provides a method by which the healing of a fracture or "take" of a bone transplant can be quantitatively evaluated from within a very few days of the injury or operative procedure. In these studies, animals were injected with varying amounts of strontium 85, a boneseeking isotope with a

relatively short half life which emits gamma rays permitting detection and measurement outside an animal's body. Fractures were induced in the rats' tibiae by a number of mechanical methods.

The NIAMD-NIDR supported investigators found that immediately following fracture, there was a sharp initial mineral loss, followed by a rapid uptake in isotope reaching a peak in five days. Comparison with the isotope measurements in the normal opposite leg indicated that in the fracture area as much as a 40 percent increase in mineral deposition occurred. The study further revealed coincident loss of mineral from adjoining bones, presumably as a source for the mineral needed in the healing of the fracture.

The method devised in this NIAMD-NIDR sponsored project should have usefulness in a wide variety of experimental studies designed to evaluate various methods of therapy proposed to accelerate and improve the healing process in bone.

Joint cartilage tissue structure characterized

Physical biologists who have previously contributed greatly to understanding of mineral-cartilage relationships in bone have now turned their electron microscope to the examination of the fine structure of joints. In work supported by an NIAMD grant, they have found two types of cartilage matrix structure at bone ends, articular surface, consisting of a thin sheet of densely packed fibrillar bundles with the characteristic features of collagen.

Electron microscopists have recently turned their techniques for determining the minute structure of biological materials to examination of human joint tissues in work carried out under an Institute research grant. Drs. D. A. Cameron and Robert A. Robinson of the Division of Orthopedic Surgery, Johns Hopkins Medical School, have found in their studies of the fine cartilage structure that there is a specific, extremely thin layer of dense collagen tissue lining the surfaces at the ends of bone. Results of these initial studies of joint cartilage composition are reported in the Journal of Bone and Joint Surgery.

Electron microscopy is an important technique of the physical biologist which is being used to define and characterize the cellular and subcellular organization of living tissues. Studies with this delicate tool frequently indicate the relationships of structure to function and have thus far been employed primarily to advance our fundamental knowledge of biological processes.

The NIAMD-supported investigators have found two kinds of fibrous structure in the rapidly growing cartilage at the ends of bones, from examination of the tissues of the newborn infants. At the joint surface, there is a layer of closely packed bundles of fibrils similar to those in bone and having the characteristic periodicity or dimensions of collagen. This dense fibrillar zone, which seems well-suited to provide smooth movement in contact with other surfaces, has very few cells and is only 25 micra (one one-thousandth of an inch) in thickness. Beneath this thin surface layer in the bulk of the epiphysis, however, the fibrils found were small, narrow, much less densely packed, and showed little tendency to form fiber bundles. The difference in structure between young epiphyseal cartilage and joint surface cartilage was so striking that it is doubtful that the young epiphysis contains true collagen although its chemical units may be present.

The significance of these studies lies chiefly in the fact that they appear to represent the first application to joint tissues of the physical biologists' technique of electron microscopy. As with most items of fundamental knowledge, the practical importance of this basic descriptive data on the fine structure of articular tissue is not certain, but the dense packing of tough collagen fibrils lying parallel to the surface seems particularly suitable for protection of the epiphysis and for smoothly moving contact with other bone ends.

Dr. Robinson and his associates have previously carried out extensive electron microscopic studies of bone and have described in great detail the relationships of collagen to bone crystals.

The Johns Hopkins investigators with this technique have been able to demonstrate the specific space arrangements between collagen fibrils and bone crystals, indicate the manner in which collagen probably contributes to the calcification process in bone, and describe the changes in fibril and crystal configuration as bone ages.

Radioactive iodine therapy evaluated

Institute grantees at Columbia University have reported their experience with radioiodine therapy in 525 patients with hyperthyroidism treated by them in the 10 years since AEC release of the isotope for general use. The series indicated

effectiveness of the therapy but unpredictability of the dose required to bring about normal thyroid function. No instances of thyroid cancer consequent to radioiodine were noted, but from various considerations this therapy should be employed in older persons rather than younger.

From the experience accumulated in the 10 years since the introduction of radioactive iodine, I–131, for the treatment of hyperthyroidism, grantees of the National Institute of Arthritis and Metabolic Diseases have reported on the therapy's effectiveness and adverse features. In the Bulletin of the New York Academy of Medicine, Drs. Sidney Werner, Bento Coelho, and Edith Quimby of the Columbia-Presbyterian Hospital, New York, have described their findings in a review of 525 patients whom they have treated with the radioactive isotope since shortly after its release for general use by the Atomic Energy Commission in 1946.

The NIAMD grantees agree with the consensus that I–131 is highly effective for control of the symptoms of an overactive thyroid gland, but point out that the method carries with it certain risks, such as that of abnormally low thyroid function or of failure to obtain remission with any given dose. These difficulties are explained by a factor of great variability from one gland to another in susceptibility to radiation effect. In general, remission of hyperthyroidism was obtained with a dose of 6 millicuries or less but in some 10 percent of the cases 15 to 25 millicuries or more were required.

The disadvantage of unpredictability of outcome is not too serious, according to Dr. Werner and his associates, since it can be largely offset by concurrent use of antithyroid drugs. Hypothyroidism from too large a dose of radioiodine is not troublesome, since replacement therapy with thyroid extract or thyroxine is virtually complete. The onset of hypothyroidism, however, may occur years after treatment and may be quite insidious.

Thyroid cancer consequent to radiation effect was not observed in the reported series nor in approximately 13,000 patients of the pooled experience of several clinics. The investigators state, however, that uncertainty about the late thyroid cancer still remains at this 10-year point, since it was originally estimated that thyroid cancer after I–131 therapy would occur, if it did so, about 20 years after treatment. This uncertainty means that it will still be the practice to limit use of the isotope in the younger age groups. Surgery rather than radioiodine in younger people is also advocated because of concern that radiation to the glands may increase the mutation rate in the offspring of the treated patient. No abnormalities to date, however, have been noted in the children of patients in the Werner series.

In reviewing the influence of I–131 on exophthalmos, the eye complication often present in hyperthyroidism, the NIAMD grantees stated that there was a dearth of comparable data by which to define its value relative to other forms of treatment. Results suggested that I–131 probably carries less risk of serious eye damage following therapy than does surgery.

Hydrogen binds molecules in various shapes

NIAMD studies of hydrogen bonding suggest such bonds are not always the straight-line structures that physical chemists have assumed, but may form a cyclical arrangement. Determination of bond shapes advances knowledge of molecular structure and may aid synthesis of various biological materials.

Physical biologists at the Institute have found that the hydrogen bonds which hold many types of molecules together may cause molecules to arrange themselves in formations not previously suspected.

Drs. Edwin Becker and Urner Liddel, of the Institute's Laboratory of Physical Biology, have reported in the Journal of Molecular Spectroscopy that studies of hydrogen bonding in simple alcohols indicate that some of the bonds are not linear in construction but may form a cyclic arrangement resembling a parallelogram. Dr. James N. Shoolery, Varian Associates, Palo Alto, Calif., cooperated in the studies.

All proteins and many other substances are held together by these hydrogen bonds, many of which may be forming and breaking thousands of times a second. Without these bonds, even water could not exist as a liquid, since individual water molecules would vaporize.

The hydrogen bond itself consists of a single hydrogen atom which has joined either 2 molecules or 2 parts of 1 molecule together. The hydrogen atom is tightly held on one side by the usual valence bonding, but in addition to this attachment it forms a weaker and more easily disrupted bond with another atom on the other side. Until now it has been assumed that such intermolecu-

lar bonds are linear; that is, the hydrogen atom and its two attached atoms lie in a straight line, with the central hydrogen atom oscillating from side to side.

By determining the frequency of this oscillation, the NIAMD investigators obtained an approximation of the shape of the bond and the amount of energy it contains, since the oscillation frequency depends upon the hydrogen atom's position with respect to other nearby atomic particles. The frequency and structure determinations were made by both infrared spectroscopy and a newer technique known as nuclear magnetic resonance.

A precise knowledge of molecular arrangements in matter is of vital importance to researchers trying to synthesize various biological materials, because they must understand a material's basic structure before it can be duplicated. The reported NIAMD studies will help make possible more accurate models of complex molecular structures. They represent another example of how the techniques of modern physics may aid in solving basic biological problems.

NEW ORAL DIABETES DRUG

Dr. DAFT. If I may I should like to give a little emphasis, and perhaps a little expansion, to a few of the more interesting developments and advances in our field of responsibility during the past year. One such development has been the introduction into general medical practice of the new oral drug against diabetes which is called tolbutamide. This drug does have certain limitations. We have known, almost from the first, that neither this oral drug, nor any of its relatives, have any particular value in the treatment of juvenile diabetes. It also is not effective in the treatment of very severe diabetes. However, in moderate diabetes in adults, it does control the disease very well. It does several things. It keeps the blood sugar level near normal. It minimizes the loss of sugar in the urine. It prevents the loss of weight, which is often associated with this disease. The patients feel very well.

It is estimated that to date perhaps 1 out of 4 or 1 out of 5 of all diabetics in this country have been shifted to the new oral drug, tolbutamide. This is certainly a tremendous advance and convenience for these patients, to be able to use an oral drug rather than being dependent on injections of insulin.

Most of these several hundred thousand diabetics which have been changed to the new oral drug called tobutamide are doing very well. A few, it is reported, particularly among the more severe of the diabetics which have been shifted to this drug, have not done well when insulin has been withdrawn. In some cases it has been necessary to go back to insulin. However, by and large, almost all of those who have shifted to the new drug have been controlled very well, indeed.

There are several new drugs belonging to this same family, and some of different design, which have been recently introduced for clinical trials. Some of these new drugs show considerable promise in the fact that they are more potent than the present one that we are using. These, however, are in a preliminary stage of testing, and a great deal more work needs to be done on them.

It is not certain as yet that tolbutamide, or any similar drug will always be with us in the treatment of diabetes. The only way we can be sure of this is by very long continued testing of these new drugs. It is possible that after several years of use it will develop that they are somewhat less useful than insulin for almost all patients, in which case, they will be abandoned of course. Of course, that is true of all drugs, particularly of those which are introduced for the treatment of chronic diseases, where they must be used over many years.

RESTORATION OF NATURAL FUNCTIONING

Senator HILL. I should not interrupt you there, but I am interested in this: Is there any hope where we might be able to get Mother Nature to go back to functioning normally, so that we will not have to use these drugs or other substitutes, I take it, for what Mother Nature performs for the ordinary person?

Dr. DAFT. That is correct, Senator Hill, and of course our goal is eventually to cure, or, if not cure, to prevent diabetes. In order to do this, however, we need a very great deal more information and that is the reason why we feel so very strongly that we must continue fundamental research to learn more about the basic physiology and basic biochemistry of the body.

Now in one way it might be said that the new oral drugs are helping Mother Nature. One of the effects of the new drugs is to stimulate the release of insulin from the pancreas. This may be the most important effect of the new drug. If it is, it is an assistance to nature itself in the production of additional insulin, for as insulin is released from the pancreas that, in turn, stimulates the pancrease to produce more of this material.

Now if this does turn out to be the major way in which the oral drugs act and the long-term stimulation of the pancreas is not harmful, then I think we will look back on this as probably the greatest advance in the treatment of diabetes since the introduction of long-acting insulin and as one of the really great milestones. There is no substitute, though, for long-term testing of these drugs. What we need to do at the present time, I think, are three things:

DRUG TESTS TO CONTINUE

I think we must continue the testing of the new drugs as they come along, for long periods, to find out exactly how useful they are. I think it probably would be wise for us to carry out some more testing on a larger scale than is being done at the present time with this or similar drugs, and we hope we can join the Veterans' Administration in a large cooperative study. It is, of course, extremely necessary, also, that we learn more about these new drugs, exactly how they are acting in the body.

Along with this very practical work which is going on in the control of diabetes, we are not, of course, neglecting, as I have mentioned, the very basic work which we feel will lead to the advances of the future.

I might mention just one thing in this area. We are very fortunate to have as the Associate Director of the Arthritis Institute, Dr. DeWitt Stetton, who is recognized as one of the authorities in the basic sciences related to diabetes.

As an indication of his position in the field, he was awarded this year the Banting Medal by the American Diabetes Association, which is their top award; and he gave the Banting lecture.

This was for his work with glycogen, the form of sugar which is stored in the body, which he has been studying with his associates for many years.

PREPARED STATEMENT

I have a more lengthy statement on the diabetes program which I believe would be of interest to the committee. I will submit it for inclusion in the record, if I may.

Senator HILL. That statement may be inserted in the record at this point.

(The statement referred to follows:)

BACKGROUND STATEMENT ON THE DIABETES PROGRAM

Diabetes research and training programs sponsored by the National Institute of Arthritis and Metabolic Diseases continued to expand during the past year, producing a number of significant developments. Progress was highlighted strikingly by the arrival on the market of tolbutamide (Orinase), the new oral antidiabetic drug, which became available in drugstores last June.

From increased appropriations, funds made available for the support of diabetes activities by the Institute during fiscal year 1958 will total an estimated $4,421,731, more than 5 times the amount expended for this purpose just 3 years ago, in fiscal year 1955. Increases in each of the past 3 years have averaged more than $1 million.

Interest and activity in the field of diabetes have increased dramatically in these recent years, as the availability of funds to support productive research has attracted many competent scientists to deal with the challenging problems in the broad areas of metabolism, biochemistry, and endocrinology bearing upon or related to diabetes research.

Financial support provided for diabetes activities, 1955–58, are detailed in the following table:

Expenditures, NIAMD diabetes program, fiscal years 1955–58

	1955	1956	1957	Estimated, 1958
Intramural	$114,700	$325,000	$515,000	$600,000
Extramural:				
Resident grants	609,156	1,248,856	2,218,604	2,972,503
Fellowships	25,000	25,000	25,000	25,000
Training grants	60,000	364,234	738,780	824,228
Total	694,156	1,638,090	2,982,384	3,821,731
Total, institute	808,856	1,963,090	3,497,384	4,421,731

The Institute has developed a diabetes program which is attacking the problem along three lines, both in its own facilities and through its grants program in research institutions throughout the country. First is the search for better means of controlling the disease, carried on through clinical and laboratory investigations designed to develop immediately applicable results and to test them thoroughly. Second, fundamental studies are conducted and supported to search out new facts about the disease process itself. It is from this type of basic research that the ultimate answers to the presently unsolved puzzles will come, the answers which will lead us to the means of prevention and cure. Third is the sponsorship of training, which, through grants to institutions and individuals in medical schools throughout the Nation, provides for the special instruction and training of research scientists and physicians in the field of diabetes, attracting to this field of effort the best among our young research manpower and developing their new, fresh talents for application to the many perplexing problems which must be solved.

This threefold attack, still young and still developing, has been carefully designed to pursue all promising leads—to uncover and develop better means of treatment, to search out basic facts about the disease and its complications, and to back up and strengthen both of these efforts by producing more of the necessary highly trained scientific manpower.

ORINASE IN DIABETES TREATMENT

Perhaps the most significant development of the year in the diabetes field was the emergence of tolbutamide (Orinase) as a common and widely used treatment for the older and mildly afflicted diabetes patient. After a long period of testing and trial, it was approved and placed on the market in June 1957, and is now generally available, upon prescription, at drugstores throughout the Nation. It is estimated that during the first 6 months tolbutamide was available, many thousands of diabetics, upon the advice of their physicians, gladly exchanged their insulin syringes for the much more simple and convenient oral method of medication made possible by this new drug. Scientists at the Institute and its grantees in non-Federal research centers participated heavily in the extensive preliminary studies and tests.

The significance of the development of this oral antidiabetes drug lies not only in the fact that it is a new and more convenient form of treatment, apparently effective and essentially nontoxic, but even more in the tremendously stimulating impact it has had upon the whole field of fundamental research in diabetes. The extensive laboratory and clinical tests which preceded tolbutamide's introduction to the public also focused attention rather dramatically upon fundamental research in metabolism, endocrinology, and biochemistry as the important source of knowledge and understanding of the nature of diabetes.

Insulin, to be effective in the treatment of diabetes, must be injected because it is a protein which is broken down and made ineffective in the digestive tract when taken orally. Thus, treatment of diabetes with insulin involves use of a syringe, which is much more inconvenient to the patient than the swallowing of a pill. Through the years much effort has been expended in attempts to develop an effective oral medication, but not until the development of the sulfonylurea drugs—tolbutamide and carbutamide—about 3 years ago, were these efforts productive of really promising results. In clinical trials in this country, carbutamide (BZ-55) was found to be too toxic for general use, but tolbutamide (Orinase) has thus far passed its tests.

Specifically, it has been found that tolbutamide has the ability to lower, without apparent toxic effects, the high levels of blood sugar found in diabetics and to reduce the consequent urinary loss of sugar in relatively mild, recently acquired diabetes in older persons. It remains to be seen whether this evidence of control of the symptoms indicates action definitely beneficial to the patient in the long run. There is still the possibility that in long-term use, damaging effects may result from the drug's action on various organs, such as the liver, and on the hormone system and enzymatic processes which regulate the metabolism of sugars.

Little, if any, response has been obtained from the drug in severely diabetic persons, and it is relatively ineffective in young patients with the juvenile "brittle" type of diabetes. It is of no use in the treatment of keto-acidosis or in the control of diabetes during surgical stress, although insulin usually is effective in controlling these diabetic emergencies.

Although much information has been obtained as a result of research studies, the precise manner in which tolbutamide operates to obtain its effects is still not known. Much of the knowledge gained has been contradictory, and it must be reported that at this writing neither a description of the exact mode of action nor a definitive indication of the long-term effects of the drug are yet available.

Information produced to date indicates that tolbutamide may act: (1) By inhibiting the action of insulinase, an enzyme which, in turn, inactivates insulin; (2) by interfering with the production or action of glucagon, a hormone arising, as does insulin, in the pancreas, and which stimulates the release of glucose (blood sugar) from its storage depots in the body; (3) by stimulating the insulin-producing cells of the pancreas, which in the diabetic are presumably unable to produce insulin in adequate amounts; or (4) by interfering with the release of stored sugar or glycogen, from the liver.

At the Institute and elsewhere scientists have been trying to prove or disprove all of these theories. For example, several grantees have presented evidence indicating that tolbutamide acts by stimulating the pancreatic cells to produce insulin, but contradictory evidence has also been presented. Should it be found, definitely, that the drug does act by stimulating the insulin-producing cells, and

if long-continued stimulation does not ultimately harm them, then tolbutamide probably will have a definite and valuable place in the long-term treatment of diabetes.

ANOTHER ORAL DRUG TESTED

Still in the experimental stage, another antidiabetic drug which can be taken by mouth, known as DBI, is under investigation by research scientists, including a number of Institute grantees. Preliminary studies indicate that DBI is generally effectively in lowering the blood sugar level of diabetic patients. Interestingly, this drug has been found to be effective in lowering the blood sugar level in some cases, such as juvenile diabetics, where tolbutamide is not effective. Investigators have found that unfortunately this drug also brought on distressing gastrointestinal side effects in many of the patients.

In early reports of one Institute grantee investigating DBI, it is noted that several other variations have been observed. For example, the investigator found that DBI inactivates the liver enzyme, insulinase, which destroys insulin, and that it lowers the blood sugar in a test animal even when the pancreas has been removed, indicating that DBI was effective even in the absence of insulin. Neither of these effects have been demonstrated in work with tolbutamide. However, like tolbutamide, DBI was found to have no effect on the peripheral utilization of glucose and to interfere with the release of glucose from storage depots in the liver.

DBI is not chemically related to tolbutamide and is not a member of the sulfonylurea family. Although it obtains effects similar to tolbutamide in several respects, it does so in a different manner. At this point not enough evidence is at hand to indicate whether this drug will eventually be useful or not. Much more study of its effects will have to be conducted before even a tentative determination can be made.

NEED FOR BASIC STUDIES

Although primarily manifested by abnormally high levels of glucose in the blood and by spillage of sugar in the urine, diabetes is not simply a disorder of sugar metabolism—it is a complex disease involving alterations in many metabolic processes. All of the biochemical derangements of diabetes have not as yet been precisely characterized, but among them is an alteration in the metabolism of fats. The most detailed knowledge concerning the manner in which sugars and fats are used in the body are pertinent and important to a better understanding of diabetes. Since the important natural substance related to diabetes is insulin, the biochemistry of insulin is of obvious importance. The manner in which insulin works has been a mystery which has intrigued research workers for more than 30 years, but still no generally acceptable description of its operation has been made. And although in recent years, more information has been accumulated about the structure of insulin than is known about any other protein, there is still no secure theory which relates any feature of the structure of this molecule to its striking and unique function. Some advances in this direction have been made, and promising studies directed along these lines are under way.

FORWARD STEPS IN BASIC RESEARCH

In the Institute's own laboratories and in research centers across the country, supported by Institute research grants, intensive studies covering almost every area of research pertinent to diabetes are under way and progress is being made. New tools and techniques are being developed and used and fundamental facts elicited upon which future steps toward the ultimate goals can be based.

Some specific examples of research progress, indicating the nature of recent accomplishments, are briefly described in the 1957 edition of Highlights of Research Progress in Arthritis and Metabolic Diseases. Headings of these descriptions indicate the subjects covered: "Grantee Scientists Study Effects of Oral Diabetes Drug"; "New Method Gets Exact Data on Diabetes Drug's Action"; "DBI, Another Oral Drug for Diabetes Is Tested"; "Surgery in Miniature Produces New Diabetes Research Tool"; "Muscle Cells Indicated as Site of Insulin Action": "Dynamic Nature of Body's Sugar Storehouse Revealed"; "Diabetes Study Shows Effects of Underfeeding"; "Diabetic Neuritis Not Caused by Vitamin Lack."

With insulin we have been able for more than 30 years to control the gross symptoms of diabetes, enabling its victims to live active, useful lives, but still we cannot prevent or cure it. Many of its aspects are still deep mysteries, and 50,000 people die of the disease and its complications every year. As we learn

new facts, new questions arise. Now, with a new oral antidiabetic, the treatment of diabetes for those with the milder forms of the disease whom it can help is simpler, but probably not better.

All of this serves to point up the fact that continued emphasis on basic reseach in all possibly related fields of metabolism, endocrinology, and biochemistry must be ever more diligently pursued, new techniques developed, every lead followed to the end. The elusive mysteries concerning the modes of action of both insulin and tolbutamide must be solved, for until the answers are at hand it seems evident that rational improvements in the treatment of diabetes will be slow.

DIABETES CONFERENCE SCHEDULED

A National Conference on Training and Research in Diabetes, jointly sponsored by the National Institute of Arthritis and Metabolic Diseases and the American Diabetes Association, has been scheduled at Atlantic City on May 3. At this conference, the first of its kind in the diabetes field, the status of diabetes training in medical schools and the impact thereon of the Institute's training grants will be evaluated in a program in which the training grant program directors of 50 medical schools operating with these grants will participate. Also participating will be invited representatives from 4-year medical schools which do not now have diabetes training grants.

Emphasis at this first national conference will be on training, although progress of research in diabetes will be on the agenda with special attention given to the place of research in medical teaching. The conference will provide an especially valuable opportunity to develop information concerning the status of each medical school's diabetes training and research programs before and since the institution of the Institute's training grants program in 1955.

It is anticipated that data derived from this conference will be valuable not only in providing a basis upon which to assay the training grants program's impact from its inception to date, but will develop information which will serve as a baseline for continuing evaluation of the effectiveness of teaching and research programs in the schools.

FUTURE PLANS AND PROSPECTS

As related early in this report, the National Institute of Arthritis and Metabolic Diseases, encouraged by the Congress and supplied with appropriations for the purpose, has increased its support of diabetes research and training in this country to a figure currently 5 times the size it was 3 short years ago. Results, it is believed, have justified this emphasis, and promising work now underway augurs well for the future. The emergence of the new oral anti diabetic, tolbutamide (Orinase) as a commonly prescribed treatment for many cases of diabetes not only provides those able to use it with a welcome release from the syringe, but has provided a stimulating upsurge of interest in, appreciation of the necessity for, and active participation in, basic research related to diabetes. Added to that, the new oral antidiabetic drug now provides a valuable new research tool which may well make possible significant research advances in the near future. The Institute's diabetes research and training programs are geared and ready to take advantage of every new development and lead.

ADVANCES IN ARTHRITIS TREATMENT

Dr. DAFT. In the area of arthritis I should like to mention two advances during the past year.

Three years ago I discussed with the committee the introduction and the testing at Bethesda—we did the testing part of this—of two new steroids called prednisone and prednisolone, which it was said at that time showed great promise. That promise has been fulfilled. These drugs are much more potent than cortisone and hydrocortisone and have largely replaced these earlier drugs in the treatment of arthritis.

Senator HILL. In other words, they proved out?

Dr. DAFT. Yes, sir; they have, in almost all regards. Now, of course, we always hope, when any new drug is introduced, it will have

no side effects or at least no serious side effects. That particular hope has not been realized. The hope that it would be an advance in the treatment of arthritis has been realized. These drugs have largely taken the place of the older drugs; however, there are some serious side effects, and because of this there has been search for new drugs.

A great many new drugs for arthritis, new steroids, have been developed by the pharmaceutical houses and have been tested, both at Bethesda and elsewhere. Some of these drugs show very great promise.

I think we can be very certain at this stage that this is not the end of the road. Some of the drugs show 3 to 5 times as great potency, as prednisone and prednisolone and apparently from early studies do not have the toxicity or side effects. I think we can confidently expect that within the next year or so there will be new and better drugs with less toxicity, for treatment of arthritis.

DIAGNOSTIC TESTS FOR ARTHRITIS

One other development in the past year, which is of tremendous help in the diagnosis of arthritis, is the introduction of new tests. One such test is the bentonite flocculation test. These tests all have the same general principle. There appears to be something in the serum of arthritics which causes properly treated normal red cells to clump together.

Now within the last few weeks new kits have been introduced. They have not come into general use yet, but they will within the next year; so that every doctor in his own office, with no special equipment and in 5 minutes will be able to make the test for arthritis. This diagnosis has been very difficult in the past.

Now none of the tests of this sort are completely specific, in the fact that there are some false positives and some false negatives, but the percentage of false positives and false negatives in these tests is very small. This will be a tremendous help to the general practitioner. When a suspected case comes into his office, in 5 minutes, with no special equipment he will be able to say, with some certainty, that this person probably has arthritis, and should go to a specialist and be studied further, or whether it is almost certain he does not have arthritis.

RESEARCH ON OTHER INHERITABLE DISEASES

In the general area of basic research, I should like to mention one area. I think it was 2 years ago that I discussed with the committee some work which was going on at Bethesda on a familial disease, galactosemia. Infants with this disease, you will probably remember, are unable to utilize milk, so it was very important for us to develop an early test for this disease, so that the children could be given other foodstuffs or food substances in place of milk.

Galactosemia, you will probably recall, although not present in the population in large numbers, is a very serious disease. If the infants are not shifted from milk, they develop cataracts and imbecility and most of them die.

Now another disease which has been studied during the past year goes by the name of alcaptonuria. It is similar in the fact that it is an inherited disease. When there is one case in a family, there are often further cases in the same family.

Now, during the first decades of life, this does not appear very serious. Patients live with the disease without great trouble. Later in life, however, there are some very serious complications such as arthritis and arteriosclerosis.

A team of investigators, both biochemists and physicians, were able to study a case of this disease during the past year, and to show that it, similar to galactosemia, is due to the lack of a single enzyme in the body which is lacking because of heredity. We have again a very good test. This does not have the same dramatic impact that the new test for galactosemia has because as yet we have nothing that we can do for these patients. It does, however, lead to a much greater understanding of the disease and we think that it is going to teach us a great deal about arthritis, because that is one of the serious manifestations of alcaptonuria, this new disease.

I give you that as just a simple illustration of very many things which are going on in the area of basic research, both in our own Institute at Bethesda and throughout the country supported by research grants.

SUMMARY OF REPORT

Senator HILL. Now, you stated some of the things, but does your statement cover a good many of the other things involved in your program?

Dr. DAFT. Yes. The statement, and the highlights which are being submitted to the committee, cover most of the advances during the past year, or some of the outstanding advances, I should say, during the past year.

Senator HILL. Now I have here a copy of what you termed the highlights of this research progress. Now, I want to say this, Dr. Shannon: In the Institutes you have some very fine, wonderful men, dedicated men, and most of them are, as we would expect, from that type of men, modest; but Senator Smith and I want this record to show just exactly what you have done, what you are doing, what the Institutes of Health mean to the health of the people, the progress that is being made in this never-ending battle against disease. So when any of our witnesses appear here—and I realize that they are limited by time, and, as I say, with this type of men they are modest, too—but I want to be sure they get into the record the story of what the Institutes are doing, and I believe Senator Smith will agree with me on that statement.

Senator SMITH. That is right, Mr. Chairman.

Now I wonder if that statement which you have in your hand could not be summarized and made a little more brief and included in this particular hearing? Would this be a good time to do that?

Senator HILL. What about that, Dr. Shannon?

Dr. SHANNON. We would be glad to work with the staff, Senator Hill, and see if it could not be pulled down.

Senator HILL. All right, you can work with the staff to see if you cannot do that, because, you see, this is a document of 249 pages. What we want, what Senator Smith and I want, and I am sure the other members of the committee want it also, is this story of what you are doing, what is being done in the Institutes, and how solid has been the investment of the funds we have given to the Institutes, and the

dividends we are getting, and the promises and the hopes for tomorrow, is that right, Senator Smith?

Senator SMITH. That is right. If it is possible to summarize that so that it will make something that we could at least refer to it, or so that we could have some kind of reference.

Senator HILL. Of course, it is in this record by reference, but if there is any way to summarize it it would be most helpful to us to have that done.

Senator SMITH. It would be a reassuring thing to the public.

(The summary statement referred to follows:)

BACKGROUND STATEMENT ON SOME NIH ACCOMPLISHMENTS DURING 1957 (CALENDAR) [1]

NATIONAL CANCER INSTITUTE

Possibility that resistance or susceptibility to infection and to cancer involve similar factors and are related.

Discovery that hair root damage gives measure of radiation exposure to whole body and to scalp.

Development of cytoanalyzer for rapid accurate scanning of slides for cancer cells.

Continued success with use of methotrexate for chloriocarcinoma (more cases and longer survival).

6-azauracil, sulfur mustard, mytatrienediol (synthetic estrogen), antiniacin, among new drugs showing promise in cancer and leukemia.

NATIONAL HEART INSTITUTE

New drug, chlorothiazide, for hypertension.

500 successful transbronchial left heart catheterizations.

Golf tee plug for repair of ruptured aortic aneurysm.

First sucecssful repair of ventricular aneurysm.

UFA, powers heart and may be what prevents starvation between dinner and breakfast.

New successful steroid regimen for nephrosis.

DIVISION OF BIOLOGICS STANDARDS

Chick potency test for polio vaccine.

Adenovirus vaccine standards and licensing.

Asian strain influenza reference vaccine and specifications.

NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

New method for rapid laboratory diagnosis of influenza—the adsorption-hemagglutination technique.

Two distinct substances found in ragweed pollen which are significant in allergy to ragweed. Also two different kinds of antibodies in patients treated for ragweed allergy were characterized.

Malaria suppressive drugs, pyrimethamine and chloroquine, blended with table salt to be taken routinely to suppress malaria.

The causative agent of toxoplasmosis, a microscopic protozoan parasite, found in pork.

Acquired toxoplasmosis treated effectively with pyrimethamine and triple sulfonamides.

Amphotericin B found to be effective antifungal agent against histoplasmosis and other systemic fungi.

NATIONAL INSTITUTE OF NEUROLOGICAL DISEASES AND BLINDNESS

Employment of hypothermia, that is, of cooling, in brain surgery reduces bleeding and gives surgeon a clearer area in which to work.

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[1] Intramural and a few extramural.

New instrument for cutting into skull with great precision and little damage to surrounding healthy tissue (a human stereotaxic device).

Procyclidine hydrochloride compound for treatment of Parkinson's disease.

NATIONAL INSTITUTE OF ARTHRITIS AND METABOLIC DISEASES

Orinase, oral antidiabetic, available on prescription and estimated in use by 1 of 4 diabetics.

DBI, another oral antidiabetic, in experimental trial stage (phenethylformamidinyliminourea).

Flocculation test adapted for rheumatoid arthritis—done in doctor's office in minutes instead of days in laboratory.

Discovery that metabolic fault in gout is overproduction of uric acid, not insufficient destruction of the acid or inability of body to excrete enough.

Development of 2 new pain killers, one probably addicting but 10 to 12 times more potent than morphine, and the other nonaddicting and more effective than codeine or Demerol.

Discovery that alcaptonuria, rare hereditary disease complicated by arthritis and arteriosclerosis, is caused by lack of a specific enzyme (homogentisic acid oxidase)—may lead to better understanding of other forms of arthritis—interesting also because an example of CC effectiveness in having under one roof and at the same time the patient with the disease and the surgeon, clinicians, biochemists, and other scientists.

Needed to expedite research—in this case result was proof of a theory postulated 50 years ago which could not have been accomplished without the CC setup.

DIVISION OF RESEARCH SERVICES

Titanium prosthetic device for repairing injured bone shaft and, for the first time, for replacing segments of long bone to restore shortened bone to normal length—so far only in dogs, but with potentiality for use in humans, perhaps substituting stainless steel in the device.

RESEARCH GRANT ON GASTROENTEROLOGY

Senator HILL. I notice the House had $500,000 to be used for gastroenterology—is that right, Doctor?

Dr. DAFT. That is correct, Senator Hill.

Senator HILL. What do you propose to do with these particular funds?

Dr. DAFT. I believe that the proposal is, sir, that they should be used to increase the overhead for the research grants at the universities.

Dr. SHANNON. I think, Senator Hill, that was a general decision that we worked out with the Department, that with the $8,200,000 increase by the House this was just about enough funds, if added to the appropriation request, that would permit the raising of the overhead or the indirect costs from 15 to 25 percent.

PAYMENT OF INDIRECT COSTS

Our strong feeling is that somewhere along the line of this increase in budget we must be prepared to pay full indirect costs, because the perpetuation of the situation as it exists will really result in an adverse effect on the financial stability of the basic institutions in this country, so that is the general decision. If you will recall, I testified to that in my statement.

Senator HILL. I recall you testified to that, and also Dr. Burney testified to it, too. I am very sympathetic. I think I see the need for an increase in that 15 percent of overhead costs, but the House, of course, did not give these additional funds, this $500,000, for that particular purpose.

Dr. DAFT. The funds were given by the House, sir, as you probably know, for an increase both in research projects and training projects in the field of gastroenterology. This general field, which includes peptic ulcers and a number of serious diseases, ulcerative colitis being another, has for many years been a greatly neglected area, which needed very badly, not only a greater emphasis on research, but also the training of individuals in this field, training for research and training for, to some extent, the care of patients, but more largely for the training of people to head up other academic departments with an interest in gastroenterology. So these funds were divided according to the House's wishes, about $350,000 for research grants and about $150,000 for training, all of it being in this general area of gastroenterology, concerning which there has been a very great increase of interest in the past 2 or 3 years.

HOUSE REPORT

Senator HILL. The House makes this statement:

Diseases of the digestive tract do not have the dramatic appeal as such things as cancer and heart. However, when one considers 1 person out of every 10 at some time during his life has a peptic ulcer, the practical need of doing something in this field is obvious. However, it is not only slighting the research field but the training field as well. Of the 84 medical schools receiving training grants from the National Institutes of Health, only 12 of them are receiving funds for gastroenterology.

So, as you say, this additional $500,000 put in by the House, was put in for the purpose of additional research grants and training grants.

Dr. DAFT. Sir, that would have permitted approximately 10 additional training grants in this area, in addition to the 12 they already have.

Senator HILL. In addition to the 12 you already have?

Dr. DAFT. Yes, sir.

PREPARED STATEMENT

If the committee wishes, I have a background statement on gastroenterology which I could offer for the record, and which I believe would be informative on this subject.

Senator HILL. That statement may be made a part of the record at this point.

(The statement referred to follows:)

BACKGROUND STATEMENT ON GASTROENTEROLOGY

Peptic ulcer, ulcerative colitis, and regional ileitis are disorders afflicting thousands of Americans. Peptic ulcer alone afflicts 12 percent of all American adults at some time. In many cases these disorders cause prolonged and expensive hospitalization, loss of income, and countless social and emotional problems. They tend to strike those in the younger and middle-aged groups at the peaks of their most vigorous and productive periods and are extensive in their effects. They may, however, strike persons of any age.

Increased interest in these disorders on the part both of the public and the medical profession as reflected in action of Congress has enabled the National Institute of Arthritis and Metabolic Diseases to increase its emphasis on research and training in the formerly neglected field of gastroenterology.

ULCERATIVE COLITIS CONFERENCE

To stimulate new research interest and to obtain an evaluation of current research and leads of promise to guide the direction of future research programs, the Institute sponsored, early in January 1958, a special conference of research scientists and physicians dealing with the subject of ulcerative colitis. The conference session, labeled "New Frontiers in Ulcerative Colitis" was held in Washington and attended by 70 clinical investigators and research scientists from research centers throughout the country. Senior research workers discussed present work and pointed out promising areas for future research, areas which had been neglected and needed inquiry, and, in general, stimulated active discussions among those present of the general problems associated with research in ulcerative colitis. It was generally agreed that this meeting was fruitful and stimulating, especially to the younger men in attendance, who will be depended upon to come up with new ideas and advances in the future. They now can profit from the experience and findings of veterans in the field and gain a running start by following certain guidelines the present veterans have posted.

KNOWN FACTS REVIEWED

Discussions at the conference included reviews of presently known facts and areas where further work is needed. It was pointed out that experimental studies had suggested a tremendous variety of possible causes of ulcerative colitis without any conclusive determinations. Some of the suggested causes were infectious, neurogenic, and immunologic agents. It was also brought out that no success had yet resulted from attempts to develop in experimental animals a disease in the laboratory. Discussion of our knowledge of intestinal viruses, dating from their discovery in 1948 to the present brought out that 46 different strains of these infectious agents inhabiting the gastrointestinal tract have been characterized. A study of the possible relationships between these viruses and ulcerative colitis has just been initiated. One investigator stated that studies had shown that a characteristic personality structure had to be present for an individual to develop the disease, suggesting the possibility of an inborn error under genetic control as one necessary factor for susceptibility. Other discussions covered hypersensitivity reactions, chemistry of connective tissue, and the role of endotoxins in immune and vascular reactions.

It was pointed out that ulcerative colitis, although not as common as peptic ulcer, has a considerable but not clearly defined incidence. Frequency of the disease in major medical centers indicates that it affects important numbers of people. The disease attacks children, but more especially men and women in the formative years of their lives. It is a chronic, recurrent illness, requiring frequent, prolonged, and expensive hospitalization, so that the physical, social, and economic problems involved in the long-term care of patients with ulcerative colitis are staggering. On the other hand, the fact that patients improve, for one reason or another, would indicate that this may be a controllable, perhaps curable disease. But, it was pointed out, much more must be learned about its causes and course of development before the possibilities of effective control, prevention, or cure can be realized.

NEW FUNDS PROVIDE STIMULUS

The availability of additional funds during the past 2 years, accompanied by calculated efforts on the part of the Institute staff to stimulate the interest of both recognized experts in the field and younger scientists in the rewarding and challenging nature of research in gastroenterology have resulted in an encouraging increase in the number of promising research projects in this field which are now being supported by the Institute. Provision for the development of the necessary trained manpower to carry on and develop this field further in the future is being made through the training grants program, by means of which young clinicians and research scientists receive the special training and preparation prerequisite to full participation in productive research in future years.

PROBLEM BEING STUDIED

With particular reference to peptic ulcer and regional ileitis, research grants have been awarded for the study of various aspects of intestinal physiology and pathology. These include investigations of changes in nutrition and gastric secretions resulting from surgical treatment (gastric resection) for peptic ulcer; chemical studies of gastric juices; investigation of the physiological functions of the duodenum in relation to associated organs and tissues; biophysical measurements of the delicate inner linings of gastric organs (gastric mucosa); studies of the relationships between activity of the adrenal gland and peptic ulcer; investigations into the treatment of gastric duodenal hemorrhage, evaluation of the relationship of various blood groups to the incidence of peptic ulcer. In addition, pathologists are trying to find the site and mechanism of disturbances of intestinal absorption in such diseases as ileitis, ulcerative colitis, and idiopathic sprue. Numerous projects are concerned with the process of intestinal absorption including the absorption of electrolytes, sugar, amino acids, calcium, and fat. Improvements are being sought in the surgical therapy of duodenal ulcer and in the management of bleeding.

EXPANSION CAREFULLY DEVELOPED

Expansion of research and training support in the field of gastroenterology has been gradual and carefully developed, with heavy emphasis upon the training of young clinicians and clinical investigators in both clinical gastroenterology and in research techniques which may be expected to be eventually most rewarding. Added funds provided in the fiscal 1958 budget permitted a sharply increased buildup of effort during this past year.

Available funds for research grants in gastroenterology were doubled in fiscal 1958, from a former base of $500,000 to $1 million. Estimated expenditures during this fiscal year for training grants will reach $256,000 with another $5,000 for fellowships. This financial outlay represents a striking increase in the amount of funds devoted to these purposes in past years. For the 5 years prior to June 1956, the total financial support to gastroenterology projects had been $752,882. During fiscal year 1957 there was a marked increase in the number of grant applications received, with a corresponding increase in the number of grants awarded, both for research projects and for graduate training grants. The fiscal support in that year approached $700,000 almost as much as was provided for these purposes during the previous 5 years. Estimated total support during the current year for research projects, training grants, and fellowships will reach a total of $1,270,000, almost doubling the previous year's record.

RESEARCH GRANTS

Senator HILL. Doctor, let me ask you this question: I believe the reason you have in this present budget some $11,137,000, is that for research grants?

Dr. DAFT. That is correct.

Senator HILL. How much would be required for the continuation grants?

Dr. DAFT. At the present time we have approved continuation grants of about $9,400,000 and we are very certain that a minimum of $600,000 more will be approved with high priority, by our Council. In other words, a total continuation level of about $10 million, about $1 million of the grants not coming in for continuation or being disapproved by the Study Sections, the Council and the Surgeon General.

Senator HILL. Do you have a backlog of unpaid grants, and if so, how much?

Dr. DAFT. During the present year, Senator Hill, there were approved by the Council, with a high priority, a little over $3,800,000 in research grants which we were unable to pay because of lack of funds.

Senator HILL. That was because you did not have the funds?

Dr. DAFT. That is correct, sir.

Senator HILL. If you add the $3,800,000 to the $11,137,000 you get approximately $15 million.

Dr. DAFT. Yes, sir; that is correct.

FUNDS FOR NEW GRANTS

Senator HILL. How much is your need for new grants?

Dr. DAFT. It is always a little difficult to predict exactly the level of new approved grants which will come before us. We can, however, judge to a large extent on the basis of what has been before our Council during the past year. During the past year the new grants which were approved by the Council, again with a very high priority, were somewhat in excess of $6,200,000.

Senator HILL. $6,200,000, and if you add that to the $3,800,000 and to the $9,400,000 you get something over $20 million, do you not?

Dr. DAFT. That is correct, sir. As you know, we have the responsibility now for the general field of physical biology. We also have responsibility now for the general field of physical biology. We also have responsibilty for this new field of gastroenterology. During the past year there has been a tremendous increase of interest in diabetes, due to several factors. One of these, I am very certain, is the introduction of the new drug, tolbutamide. Even if this drug were to disappear within the next 10 years, the effects of its introduction would be tremendous because every one of our grantees in this field is working on the new drug; they are learning a great deal more about the disease, diabetes, and its introduction is going to have a tremendous impact on the field.

This has been felt during the past year and undoubtedly will be felt during the next year, so that that again explains, to a certain extent, the very large volume of research grant applications—good applications—which have come before our Council.

Senator HILL. You said "good applications"?

Dr. DAFT. Yes, sir. They are fully as good as the ones we have paid.

TRAINING GRANTS

Senator HILL. What about the training grants?

Dr. DAFT. The training grants—for this year, sir, we had $2,350,000. That was increased by the administration to $2,500,000, the extra $150,000 being for the field of physical biology, restricted to that area. The House added to this.

Senator HILL. That will give you another $150,000.

Dr. DAFT. Yes, sir; another $150,000. This [indicating] is restricted to the area of gastroenterology. That makes a total of $2,650,000.

Senator HILL. Now is that sufficient to take care of all of your needs in all your areas of activity, including arthritis and diabetes and gastroenterology and physical biology?

Dr. DAFT. No, sir. I must say, as a program operator, there will very many grants that will be denied, after they come before us and are approved by the Council with high priority, because of no funds.

Senator HILL. Now, speaking from the advice of your Council and your other advisers and your own experience and knowledge, how much do you need for this?

Dr. DAFT. Our Council did consider this matter, Senator Hill, and they, after very careful consideration of these various areas, figured out our needs in all of these areas, for the coming year at $4,750,000 in training grants, in the training area.

Now, I realize that this is far beyond the present budget and I would hope, Senator, that at some time I might come before you and testify as to the needs in this area. The Council has indicated that they feel very strongly that we need—the figure which was given by the Council, sir, is $4,750,000.

Senator HILL. That is what the Council figured that you needed additionally?

Dr. DAFT. Totally, sir.

Senator HILL. That is, $4,750,000?

Dr. DAFT. That is correct.

Senator HILL. Rather than the budget estimate of the $2,500,000?

Dr. DAFT. Yes, sir; that is correct.

Senator HILL. They figured you need about twice what the budget allowed you?

Dr. DAFT. That is correct, sir.

Senator HILL. Do you have any questions, Senator Smith?

Senator SMITH. I have no questions as of now.

Senator HILL. Well, Doctor, you have always brought us some most interesting and informative presentations and we thank you, and extend to you our deep appreciation.

PHYSICAL BIOLOGY

Dr. DAFT. With respect to the program of physical biology which I mentioned a moment ago, I have another prepared statement on the subject which I might offer for the record, which explains the program in somewhat more detail than I have already discussed.

Senator HILL. That statement will appear in full at this point in the record.

(The statement referred to follows:)

BACKGROUND STATEMENT ON THE PHYSICAL BIOLOGY PROGRAM

A major trend in medical research today is the rapid development of what is, essentially, a new science-physical biology. Application of the powerful tools, of the techniques, and of the thinking of physicists and mathematicians to study of living cells is opening a new frontier in the biological sciences. In recognition of this, the National Institutes of Health is broadening its already existing operations in this new field, both in its direct research program and its extramural grants program. The expanding program is centered primarily in the National Institute of Arthritis and Metabolic Diseases.

TRAINING

The primary problem in expanding research activity in the field of physical biology is the pressing need for trained manpower. Very few thoroughly trained and competent physical biologists exist. Initial emphasis, consequently, is being placed upon the training of physicists and biologists in the highly specialized techniques of physical biology.

During the current year training grants totaling $360,000, the limit of available funds, were awarded. Of this total, $200,000 now supports major training pro-

grams at three institutions, while the balance ($160,000), in the form of 20 supplemental grants, provides funds for reimbursement of graduate students employed on research projects in physical biology supported by NIH project grants. A continuing need and demand for increased training grant support of worthy training programs is now apparent. Now pending and awaiting Council action are applications for nine training grants for a total of $692,095.

RESEARCH GRANTS

The burgeoning interest and productivity of physical biology research is reflected by the rapidly accelerating number of research grant applications which are being submitted. Requests for grant support, approved by study sections and advisory councils of NIH, have far outstripped the availability of funds during the past year, and the trend continues.

During the current fiscal year 200 research projects in physical biology, including 15 in radiation studies, are being supported with a total of $3,534,988. These funds are financing, for example, studies of the effects of radiation on tissue, properties of bone, and X-ray diffraction studies to determine the exact structure of biologically active compounds. Now being reviewed by study sections and awaiting action by advisory councils are 77 applications for research grants totalling $1,765,708.

INTRAMURAL RESEARCH

Problems affecting life and health at high altitudes and during space travel and the problems related to effects of ionizing radiation are today prominent in the field of physical biology. Studies in these fields are, and have for some time been, under way in the National Institute of Arthritis and Metabolic Diseases. Equally important are studies now underway on the conversion of chemical to mechanical energy, for example, from carbohydrate sources to muscle contraction. From some of the physical biology studies now in progress may come new knowledge on insulin problems. Also underway and progressing in satisfactory and productive fashion are related study programs on the energetics of interaction between cells and their environment and on the exchange of ions and molecules and the transfer of these across cell membranes.

A basic need in physical biology is for predictive methods of great complexity, which require the assistance of persons trained in mathematical analysis. Consequently, an early step taken by the National Institute of Arthritis and Metabolic Diseases in increasing intramural emphasis on physical biology was the establishment of a section of mathematics, staffed by mathematicians especially competent in the specialized fields encompassed by the physical biology research program. Studies of problems involving kinetics and the analysis of sequential enzyme-catalyzed reactions are underway. The mathematics staff has also, in consultation with scientists concerning their individual projects, contributed significantly to the solution of biological problems.

Another area in which development is underway concerns the chemical and biological effects of neutron bombardments. One of the country's outstanding nuclear physicists who has also a special competence and interest in biological applications is heading up activities in this field at the Institute and is completing extensive plans and designs for projects and for the necessary complicated equipment and facilities they require. A source of low-energy neutrons is on order and housing for it arranged. Recruiting for the highly specialized personnel required is underway.

Due to the complex nature of the especially designed equipment and facilities necessary in this field, as well as the comparative rarity of adequately trained personnel, the problems involved in the initiation of new and pioneering programs require great amounts of advance planning, pilot development, substantial sums of money, and, most of all, time.

Total estimated expenditures on the NIH physical biology program during fiscal year 1958 (direct research) is $710,000.

Allergy and Infectious Disease Activities

STATEMENT OF DR. JUSTIN M. ANDREWS, DIRECTOR, NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES; ACCOMPANIED BY DR. JAMES A. SHANNON, DIRECTOR, NATIONAL INSTITUTES OF HEALTH; AND JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

"Allergy and Infectious Disease Activities

"[Allergy and infectious disease activities:] For expenses, not otherwise provided for, necessary to carry out the purposes of the Act relating to allergy and infectious diseases, [$17,400,000] *$17,497,000*, of which $150,000 shall be available for payment to the Gorgas Memorial Institute for maintenance and operation of the Gorgas Memorial Laboratory."

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate	$17,400,000	$17,497,000	$17,997,000
Deductions:			
Comparative transfer to "General research and services, NIH"	−86,000	0	0
Unobligated balance, estimated savings	−22,000	0	0
Total obligations	17,292,000	17,497,000	17,997,000

Obligations by activities

Description	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Grants:						
(a) Research projects	--------	$10,824,000	--------	$10,824,000	--------	$11,156,000
(b) Research fellowships	--------	101,000	--------	101,000	--------	101,000
(c) Training	--------	580,000	--------	580,000	--------	580,000
2. Direct operations:						
(a) Research	505	5,520,000	505	5,740,000	511	5,900,000
(b) Review and approval of grants	15	193,000	15	178,000	16	186,000
(c) Administration	11	74,000	11	74,000	11	74,000
Total obligations	531	17,292,000	531	17,497,000	538	17,997,000

Obligations by objects

Object classification	1958 appropriation	1959 budget estimate	1959 House allowance
Total number of permanent positions	531	531	538
Full-time equivalent of all other positions	5	5	5
Average number of all employees	487	[1] 499	[1] 505
Number of employees at end of year	514	[1] 518	[1] 526
01 Personal services	$2,765,800	$2,846,600	$2,888,800
02 Travel	71,600	68,600	69,000
03 Transportation of things	41,100	45,100	46,100
04 Communication services	21,700	22,200	22,200
05 Rents and utility services	33,000	35,100	35,100
06 Printing and reproduction	2,700	2,700	2,700
07 Other contractual services	151,400	179,400	239,500
Reimbursement to National Institutes of Health management fund	2,068,000	2,096,000	2,116,000
08 Supplies and materials	370,900	391,900	407,100
09 Equipment	134,200	169,200	196,200
11 Grants, subsidies, and contributions	11,487,000	11,487,000	11,819,000
Contribution to retirement fund	141,700	150,200	152,200
13 Refunds, awards, and indemnities	400	400	400
15 Taxes and assessments	10,200	10,300	10,400
Subtotal	17,299,700	17,504,700	18,004,700
Deduct quarters and subsistence charges	7,700	7,700	7,700
Total obligations	17,292,000	17,497,000	17,997,000

[1] Reduction in employment to absorb costs of scientist-engineer pay adjustment is not reflected in the 1959 President's budget, but is included here since it is a mandatory item.

Summary of changes

	Positions	Amount
1958 actual appropriation	531	$17,400,000
Transfers: Comparative transfer to "General research and services, NIH"		−86,000
Adjusted 1958 appropriation	531	17,314,000
Deduct nonrecurring costs: Estimated savings		−22,000
1959 base	531	17,292,000
1959 appropriation request	531	17,497,000
Net change requested	0	205,000

	1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount
Decreases:				
Reduction in new research projects to absorb indirect costs		$741,200		
Reduction in miscellaneous objects to absorb cost of annualization of retirement contributions		8,500		$8,500
Reduction in miscellaneous objects to absorb cost of annualization of 1958 base positions		13,000		$13,000
Reduction in employment to absorb costs of scientists and engineers pay adjustment		[1] 8,000		[1] 8,000
Subtotal, decreases		770,700		29,500
Increases:				
For mandatory items:				
Retirement contributions:				
Annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)		4,300		4,300
Annualization costs for 23 additional positions authorized in 1958		194,200		194,200
Pay adjustment costs for scientists and engineers		[1] 8,000		[1] 8,000
Subtotal, mandatory increases		206,500		206,500
For program items:				
Amount necessary to support full indirect costs		741,200		
Research projects in cystic fibrosis, staphylococci, and respiratory infections				332,000
Cost of increased review and approval services			1	8,000
Direct research in clinical allergy			3	50,000
Direct research in germ free			2	40,000
Direct research in upper respiratory viruses			1	50,000
Net change in reimbursement to National Institutes of Health management fund		28,000		48,000
Subtotal, program increases	0	769,200	7	528,000
Total change requested	0	205,000	7	705,000

[1] Scientist-engineer pay adjustment is not reflected in the 1959 President's budget, but is included here since it is a mandatory item.

EFFECT OF HOUSE ACTION

Activity No. 1 (a)—Grants for research projects

An additional $332,000 was allowed for support of research projects in the fields of cystic fibrosis, staphylococci, and respiratory infections.

Activity No. 2 (a)—Research

The full amount requested of $5,740,000 and 505 positions was allowed by the House, and an additional 6 positions and $160,000 was earmarked for clinical allergy, germ free, and upper respiratory virus research. This is an increase of $380,000 over the 1958 appropriation.

Activity No. 2 (b)—Review and approval of grants

The full amount requested of $178,000 and 15 positions was allowed by the House, and an additional $8,000 and 1 position was earmarked for the review and approval of grants activity. This represents a decrease of $7,000 compared with the 1958 appropriation.

PREPARED STATEMENT

Senator HILL. Dr. Andrews, we are very happy to have you back with us again. We welcome you, sir. Do you wish to file your statement?

Dr. ANDREWS. Yes, sir.

Senator HILL. It will be placed in the record at this point.

(The statement referred to follows:)

STATEMENT BY DIRECTOR, NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

Mr. Chairman and members of the committee, the 1959 budget proposal for this appropriation is $17,497,000.

The National Institute of Allergy and Infectious Diseases conducts and supports research on a number of diseases which collectively represent our major cause of morbidity and rank high as causes of disability and death. These include allergic conditions, such as hay fever and asthma; infectious diseases, such as the common cold, influenza, Colorado tick fever, and tuberculosis; and parasitic diseases, such as malaria.

The virus diseases, particularly the gamut of respiratory viral illnesses, represent a new frontier in infectious disease research. The Institute is conducting extensive studies in this area, including epidemiological surveys in special population groups. The pandemic of Asian strain influenza has provided unique investigative opportunities, as in assessing the value of vaccines and developing new diagnostic methods. Other viruses associated with mild or severe respiratory symptoms are being discovered and characterized.

Arthropod-borne viruses prevalent in the tropics, and sometimes epidemic in the United States, will be studied through a new exploratory laboratory in the Panama Canal Zone: the Middle America Research Unit.

Also in the field of tropical medicine, expanding malaria research by the Institute takes into account the heavy national investment in eradication of this parasitic disease.

Continued emphasis is being placed upon allergy immunology and viral diseases, and the Institute facility for work with germ-free animals is being expanded. A new graduate training program has been initiated, and grants have been made for the support of special training in fields of critical scientific manpower shortage—in allergy immunology and in tropical medicine and parasitology.

EFFECT OF HOUSE ACTION

The House provided an increase of $500,000 of which $332,000 will be used for support of research projects in the urgent areas of staphylococcal and respiratory infections, and cystic fibrosis of the pancreas. This increase will also provide $160,000 for intramural research programs on respiratory infections, clinical allergy, and germ-free animal studies. The increase will also provide the review and approval of grants activity with $8,000 over the amount in the President's budget.

FORMAL STATEMENT

Mr. Chairman and members of the committee, the budget proposal that is before you requests an appropriation of $17,497,000 for the activities of the National Institute of Allergy and Infectious Diseases in fiscal year 1959. This compares with $17,292,000 in availability for these same activities in 1958.

The 1959 estimate reflects shifts in program emphasis to meet new needs in research and to take advantage of new opportunities for critical study. The importance of allergic diseases to health and the need for progress in understanding the underlying causes of these diseases are recognized in the reprograming of activities during 1959. Another subject receiving emphasis is that of insect-borne viral infections, particularly those which occur in Middle America and threaten the health of American citizens. By program rearrangement, additional support will be made available to augment research on acute respiratory virus diseases, germ-free animals, and malaria chemotherapy.

RESPIRATORY VIRUS DISEASES

The National Institute of Allergy and Infectious Diseases has a well-established and recognized reputation for intramural research achievements in the field of respiratory illnesses, including influenza. Within the last several years, scientists in this Institute and grant-supported laboratories have recognized at

least 70 previously unknown viruses. Many are associated with respiratory diseases ranging in significance from the group generally known as the common cold to more serious illnesses, such as pneumonia.

As methods for cultivation of these viruses improve and precise knowledge of their relative clinical importance increases, preventive measures, including vaccination, will advance rapidly. It has become increasingly clear that the common cold may be caused by any of a number of these viral agents, depending on many factors such as the season of the year and the age (respiratory disease experience) of the patient. It also seems likely that infection of man by most of these viruses may be manifested by a gamut of respiratory symptoms. In orphanages and children's homes, where respiratory epidemics of one sort or another flourish almost continually, it is possible to follow the epidemiologic patterns of outbreaks of respiratory disease and to search for the causes.

Within the last few weeks, for instance, Institute virologists have uncovered two entirely new families of respiratory disease viruses. A newly devised method of detecting such agents in tissue culture led to these discoveries. The new viruses appeared in at least two different parts of the country this fall, causing respiratory disease in infants and children. A significant proportion of these children developed pneumonia. Laboratory studies of the viruses show them to be distinct from known types of influenza and from other recently described viruses, such as the adenoviruses and ECHO viruses.

The epidemic of influenza of uncertain characteristics and potentialities this year represented an opportunity for respiratory disease research. Before the epidemic was well underway in this country, the Laboratory of Infectious Diseases of the National Institute of Allergy and Infectious Diseases had published reports of a novel, time-saving laboratory method of identifying the new strain of influenza virus and other viruses by means of hemadsorption in tissue cultures. Our scientists also demonstrated, by a live-virus challenge experience in human volunteers, that the new Asian influenza vaccines made available in July 1957 produced definite though not complete protection both against the likelihood of infection and its severity. This evidence was one of the considerations which led to the decision to increase the potency of commercial vaccines.

Together with the Armed Forces Epidemiological Board, this Institute supported extramural investigations by laboratories and scientists competent in this field. Some 40 requests for influenza research grants were received and reviewed, of which 13 grants for $187,347 were approved for immediate payment. Subjects of investigation included diagnostic technology, clinical aspects, therapeutic management, basic studies of the new influenza virus, vaccine effectiveness under varying conditions of concentration and injection, complicating disease agents, etiology and virulence, epidemiology in community and institutional populations, and establishment in lower animals. These studies are still under way.

ARBOR VIRUSES

Among other viral diseases receiving increased attention are those caused by the ARBOR viruses (arthropod-borne, including those transmitted by mosquitoes). Disease agents of this type may cause several forms of encephalitis (central nervous system involvement with varying degrees of paralysis) in man and domestic animals. At times, mosquito-borne virus encephalitis has been epidemic in regions of the United States.

To investigate these and similar diseases the Department of Health, Education, and Welfare, the Department of the Army, and the Panama Canal Zone Government, on Ooctober 16, 1957, authorized a field research party in the Canal Zone for a period of 3 years. This is known as the Middle America Research Unit and will be jointly staffed by the National Institutes of Health and the Walter Reed Army Institute of Research. The laboratory, which begins operation in February, will also investigate some of the local diseases that have been particular problems to the military. Construction and equipment installations of a temporary nature are now underway. It will supplement and in no way interfere with or overlap the investigations of the Gorgas Memorial Laboratory in Panama, which are presently concerned largely with studies on yellow fever, cutaneous leishmaniasis, and sandflies.

OTHER VIRUS DISEASES

Among other viruses being investigated is the one causing Colorado tick fever. This disease, common throughout the Rocky Mountain area, is a hazard to vacationers and students visiting these regions during the summer months. The

Rocky Mountain Laboratory at Hamilton, Mont., studies its distribution, its spread by ticks, and clinical characteristics. These researches are directed toward effective methods of control, and the development of a vaccine now seems probable.

New information has been obtained concerning more familiar viruses. The mumps virus, for example, has been shown to persist in the body longer than previously thought. Another virus thought by Russian investigators to be a new type of poliovirus (type 4) has been shown by Institute scientists to belong to the Coxsackie Group A family, and to be a cause of meningeal infections. It is probably capable of causing poliolike paralysis in children.

There have been rapid developments in virology relating to a number of mammalian tumors. The Director of the National Cancer Institute has outlined this area of research as it applies to cancer. Our investigative role is fundamental, examining such problems as the persistence of viruses within the cell itself. The Institute and its grantees are studying the nature of viruses and the means by which they live in and destroy cells, considerations involving fundamental research on biological enzymatic reactions at the primary level of life processes.

BASIC RESEARCH ON VIRUSES AND CELLS

An understanding is gradually emerging of the mechanisms by which viruses reproduce themselves within the cell and utilize the material of the cell. New and fundamental information was obtained from studies on nutritional requirements of human cells during the past year. This concerns the biosynthesis of nonessential amino acids and their subtle but probably essential role in the survival and growth of cells. These developments, considered in relation to the highly significant work that was done on the essential amino acids during the previous year, have many implications that apply directly to problems now being studied in tissue-culture systems, including antibody production, sensitization, phagocytosis, virus propagation, and cancer cell replication. One of the effects of manipulating the nutrition of cells has been to demonstrate quantitative differences in two important enzymes in different lines of the same cell. Other studies of metabolism of cells infected with viruses have demonstrated differences occurring in the protein and nucleic acid metabolism between normal and infected cells. Infected cells also have been found to release phosphates in a regular manner which can be correlated with observable cytopathic changes and the release of virus as determined by virus titer. These investigations are being carried on both in Bethesda and Rocky Mountain Laboratory at Hamilton, Mont.

MALARIA

As a world center for tropical disease research—an area increasingly neglected by most facilities since the end of World War II—the Institute may take credit for maintaining a continuity of advance against these diseases. Reprograming in recent years has placed increasing emphasis on tropical medicine, especially on malaria studies.

Millions of United States dollars are being spent on worldwide malaria eradication through WHO, ICA, UNICEF, and other international organizations. The approach to this project is generally the use of residual insecticides, which has been successful in ridding large areas of malaria. However, there are places where, for various reasons, this technique is not effective. Here mass malaria chemotherapy must be relied upon for preventing the infection of mosquitoes until all transmission of malaria ceases and the disease is thus eradicated. This appears to be entirely possible if cheap, effective, nontoxic antimalarial drugs are available, which do not cause parasite resistance and which can be administered economically to large numbers of people with minimum supervision.

Malaricidal drugs have been greatly improved since World War II, but additional basic and applied research is needed to produce compounds possessing all of these specifications, and thus to obtain the maximum return from the American investment in global malaria eradication. Primary emphasis will be placed upon new methods of microbial study which have been developed in recent years, particularly the use of tissue cultures. Other fundamental research will include studies of genetic variation in strains of malaria parasites with relation to their susceptibility to drugs; work on the pharmacodynamic features of the clinical management of patients by newly developed therapeutic agents; and investigation on the basic mechanisms of cell parasitism.

TUBERCULOSIS

Progress in tuberculosis research is not rapid, but slowly the important elements in curative and preventive measures for this disease are being defined. Other groups in the PHS are attacking these problems from several standpoints. This Institute's research efforts in tuberculosis have been devoted primarily to immunologic techniques and prevention. Scientists of the Institute and its grantees employing newer methods break up tubercle bacilli and select active fractions for evaluation of vaccine potentialities.

Many physicians dealing with tuberculosis in this country do not advocate the use of BCG vaccine except in nonimmune people exposed to great risk of infection. This is because nearly all of the active cases now developing in the United States represent recrudescence of earlier mild or subclinical infection. Persons with naturally acquired subclinical infection have positive tuberculin tests and are not candidates for BGG vaccine. Another deterrent to the use of BCG is the lack of uniformity of the product, except when made under skillful supervision.

The Surgeon General's Special Committee on Tuberculosis, the membership of which includes the most experienced tuberculosis clinicians and investigators in the United States, recently (June 1957) prepared a comprehensive report on this subject. The Committee agreed that BCG did confer some protection against tuberculosis, but questioned whether this was enough to justify its greater use in this country in light of the general progress in tuberculosis control and in the face of the several disadvantages noted. It believed that decisions as to its use in communities or population groups should be determined by the particular circumstances obtaining, and that in general it should be advocated for physicians, nurses, medical and nursing students, laboratory workers, hospital employees, persons unavoidably exposed to continued contact with infectious cases in the home, and for patients, inmates, and employees of institutions such as mental hospitals and prisons where case-finding programs indicate that exposure to tuberculosis is high.

In view of these considerations, specialists in this area have devoted much time to the development of a more effective tuberculosis vaccine free from undesirable properties. This Institute has made 10 grants in the amount of $240,000 supporting research relative to this subject. The grantees include Nation's outstanding authorities on tuberculosis. Various fractions and extracts of tubercle bacilli and their parts, irradiated, produced with special growth-promoting materials, and with other special treatments, are being tried in different experimental systems. Related studies are being carried on in our own laboratories.

ALLERGY AND IMMUNOLOGY

Progress has been made in the professional staffing for this new program. One useful finding which has already appeared is the adaptation of the bentonite flocculation test for the diagnosis of rheumatoid arthritis. Collaborative clinical studies with investigators in the National Institute of Arthritis and Metabolic Diseases have shown it to be the most simple and specific diagnostic test available. Its application by clinicians will expedite the early recognition of the disease.

The scientists at Bethesda have concentrated on developing a basic laboratory to encourage original and novel approaches. On these projects just now getting under way with the leadership of Dr. Jules Freund, an internationally known investigator, will be built a clinical program directed toward solving problems in allergic diseases.

(The Institute has made 96 research grants ($1,381,046) for basic and clinical studies of these important diseases which are being attacked from a great variety of standpoints.

In an Institute grant-supported study at the University of Michigan, for example, a number of investigators have undertaken a study of atmospheric pollution by aeroallergens such as ragweed pollen. This comprehensive program of research includes integrated studies of the plant and its pollen, of the means by which the pollen is dispersed in the atmosphere, and of the nature of the physiological reaction of sensitive individuals to it. Specialists in botany, internal medicine, meteorology, and public health are working cooperatively on the study. Several of the findings have already been published in scientific journals. They represent basic factual contributions on the effect of weather conditions on pollen dispersal and on various medical aspects of ragweed air pollution. For instance,

subjective and objective asthma and hay fever symptoms were related to pollen counts, and at the same time respiratory evaluations and blood tests were done on patients to get a coordinated picture of what is taking place. All of this information should provide a pattern for later attempts to find more effective means of relief for sufferers from hay fever and asthma. Ragweed pollen is being studied initially because it is one of the chief offenders among allergens in the United States.

Several universities have begun grant-supported investigations into the allergic contact dermatoses that are frequent causes of industrial absenteeism and a deterrent to productivity. Studies from different vantage points are under way at the University of Pennsylvania, New York University-Bellevue Medical Center, the University of Cincinnati Medical College, and Washington University, St. Louis. Allergic contact dermatitis is frequently seen among workers who handle dyes and dye intermediates, rubber accelerators, photographic developers, antioxidants, soaps, insecticides, plastics, plants and plant derivatives, antibiotics, and many of the new industrial materials now coming into use for the first time. People in every occupation, including the housewife, are often troubled by moderate or severe allergic reactions to materials with which they come in contact.

GERM-FREE ANIMAL STUDIES

The germ-free chamber for studying bacteriologically sterile animals offers a new dimension to the microbiologist, and has been described as a research tool comparable in potential to the microscope. Well-conceived and promising proposals for utilizing germ-free animals to answer fundamental questions about the precise role of bacteria in the production of disease await the availability of facilities for producing and maintaining these animals.

The expansion of NIAID Section on Germ-Free Animal Studies continues, implementing directives of medical advisory groups and of the Congress, to give increased emphasis to this area of research in view of its special promise. The small group of specially trained scientists comprising the Germ-Free Section will shortly move to a new facility at NIH. Here, nine additional pressurized, stainless-steel chambers have been installed and will be activated, in addition to the chamber now in use. Two of the new germ-free apparatuses will be maintained by NIAID for use by other Institutes.

Similar pioneering studies by the LOBUND laboratories at the University of Notre Dame, supported by research grants, have maintained the continuity of this work and facilitated its organization in a number of other research centers in this country.

GORGAS MEMORIAL LABORATORY

This Laboratory, which is the operating research facility of the Gorgas Memorial Institute of Tropical and Preventive Medicine, Inc., was established in 1929 and is located in Panama City, Republic of Panama. It investigates diseases of the American tropics and is staffed by medical, entomologic, virologic, and parasitologic scientists. It has been a continuously productive source of new knowledge concerning malaria, helminthic infestations, insects of medical importance, tropical zoonoses, and a variety of microbiological infestations endemic to tropical America. Of late years, it has been supplying virologic information of great value to this country and to the Pan American Sanitary Bureau concerning the northward movement of yellow fever in monkeys and in man from Central into North America. Recent findings of the laboratory indicate that yellow fever virus has been isolated from Guatemala near the Mexican border and has now been found in three species of Central American mosquitoes collected in Guatemala. One of these occurs also in the southern United States.

Important observations have been made concerning the host reservoir and transmission of cutaneous leishmaniasis, a disfiguring ulceration which occurs in Equatorial America. Organisms causing this disease have been isolated repeatedly from the forest-dwelling spiny rats, and lesions in man have been experimentally produced from such cultures. It is probable that the transmitting insect is a species of Phlebotomus sandfly which is capable of carrying this and certain other tropical infections elsewhere.

The major portion of the operating funds of this Laboratory has been supplied by United States congressional appropriation. The amount requested for fiscal 1959 is the same as the appropriation for 1958, $150,000 the maximum allowed by an act of Congress—H. R. 8128—passed in 1928.

GRADUATE TRAINING GRANTS

A new program for this Institute, these grants authorized by Congress last year are being used to overcome some of the critical deficiencies in scientific manpower in allergy-immunology and tropical medicine and parasitology.

Immunologic and allergic public health problems are of considerable magnitude, whereas there are very limited numbers of investigators competent in this area of research. Twelve of the first thirty grants for graduate training were awarded, therefore, for special training in immunology and allergy.

There is also an inadequate supply of trained investigators in tropical medicine. After World War II, facilities for research in this field were sharply reduced. The Institute is one of the few centers maintaining a continuity of effort against the tropical diseases. Eighteen of the first thirty grants were allotted for training in tropical medicine and parisitology and related fields of mycology and rickettsiology.

This program, a long-needed adjunct of the allergy and infectious diseases research activity, provides more adequate training in areas of critical scientific manpower shortage and removes a barrier to progress in the future.

BUDGETARY INCREASES FOR 1959

The only increases proposed in the budget are those necessary (1) to annualize the expanded research in allergy and immunology—$100,000—and in supporting the tropical viral studies planned in the Panama Canal Zone—$90,000—and (2) to augment the contribution of this Institute to the NIH management fund for centrally furnished research services—$30,000.

EFFECT OF HOUSE ACTION

The House provided an increase of $500,000, of which $332,000 will be used for support of research projects in the urgent areas of staphylococcal and respiratory infections, and cystic fibrosis of the pancreas. The increase will also provide $160,000 intramural research programs on respiratory infections, clinical allergy, and germ-free animal studies. The increase will also provide the review and approval of grants activity with $8,000 over the amount in the President's budget.

GENERAL STATEMENT

Dr. ANDREWS. I think, Mr. Chairman, you will recall when I appeared before you last year I had occupied this position for something less than 3 weeks.

Senator HILL. I remember that, sir.

Dr. ANDREWS. In the intervening year, of course, I have had an opportunity to become much more familiar with the program of this Institute and I may say it has been a very happy and challenging experience for me to occupy this position.

I would like to talk briefly about three new programs which were launched this year.

GRADUATE TRAINING GRANTS PROGRAM

The first of these is our graduate training grants program. I think perhaps my first major undertaking when I came into this position was to sign 150 or more letters announcing this program to the medical and other schools concerned with research training in our special field. This program was enthusiastically received. In fact, I am sure it must have surpassed the expectations of those who planned it, because at the very first meetings of our Advisory Council thereafter, the entire sum of money available was committed for training grants. Inasmuch as practically all of it was on a 5-year basis, we were almost immediately out of business, as far as additional training grants were concerned.

I think this is of great importance. At the recent House Appropriation Subcommittee hearings, our Director of the NIH spoke with

considerable feeling about the substantive obligations of the other Institutes with respect to the National Institute of Allergy and Infectious Diseases. You heard yesterday the testimony of Dr. Heller who, for his proposed cancer activities, is going to require virologists and probably immunologists. This creates further demand for infectious-disease specialists, already in short supply. The only way he can get them is to take them from existing positions which will be left vacant, unless this Institute is able to promote the development of more of these specialists by supporting additional training facilities and fellowships. I trust that this will be possible.

At present, research training with reference to the bacterial diseases is well done, though more research bacteriologists are needed. Courses are offered in many schools of the Nation. In tropical medicine, the situation is less adequate—but when it comes to the diseases caused by viruses or by fungi, or to the rickettsial diseases such as typhus, for example, the training opportunities are actually not much beyond their infancy. This is not to say that this training is not good where it is offered, but rather that it is not available in many places.

So we feel that we have made an effective initial impact in our graduate training program, but that much more remains to be done.

MIDDLE AMERICA RESEARCH UNIT

The next enterprise I should like to mention is the Middle America Research Unit, which is being set up in the Panama Canal Zone. This field laboratory is a collaborative undertaking between the Public Health Service and the United States Army Walter Reed Institute of Medical Research.

This was opened officially on December 29, 1957, and was established in the nurses' home of the Gorgas Memorial Hospital down there. The staff consists of 6 professional and technical workers and 14 supporting personnel.

The Canal Zone was selected as the site for this laboratory because it provides ample opportunities to study certain tropical diseases of interest both to the Army and to the Public Health Service.

INTEREST IN FUNGAL AND VIRAL DISEASES

The Army is particularly concerned with certain fungal diseases of the tropics.

The National Institutes of Health is interested in tropical viral diseases transmitted by insects, especially those viral diseases which find their way to Temperate Zone areas.

The facilities of this laboratory will permit accomodations for a few visiting investigators, and we trust that a number of people will be interested in occupying them for short periods of time.

This laboratory is at present established for 3 years only, at the end of which time stock will be taken of the progress made and things yet to be done to see whether or not it should be continued. We do not believe that this laboratory will compete with the Gorgas Memorial Laboratory in which I know the Senator is greatly interested.

Senator HILL. Would you repeat that, please?

Dr. ANDREWS. We see no reason for believing that the activities of this Canal Zone Laboratory will compete with those of the Gorgas Memorial Laboratory. We trust that they will live in comfortable,

neighborly relations, because each one of them has much to offer the other, and I would think that their activities should be mutually supplementary. They augment each other and they are sufficiently different in their present programs so that we do not believe they will overlap or duplicate.

The third program that I would like to call to your attention is this——

Senator HILL. Excuse me, Doctor. I wish you would supply, although I do not want you to take the time now—but supply for the record a detailed statement as to the work being done in the laboratory and the work of the Gorgas Memorial Laboratory. Will you do that?

Dr. ANDREWS. Yes, sir.

Senator HILL. You might also go further and give us your opinion as to why there would be no conflict there, and also why there should not be just, say, the 1 laboratory, instead of the 2.

Dr. ANDREWS. Very well, sir; we will do that.

(The information referred to follows:)

STATEMENT OF ACTIVITIES OF THE MIDDLE AMERICA RESEARCH UNIT AND THE RELATION OF ITS RESARCH PROGRAM TO THAT OF THE GORGAS MEMORIAL LABORATORY

The Middle America Research Unit of the National Institute of Allergy and Infectious Diseases, National Institutes of Health, was officially established on December 29, 1957, at Ancon, Canal Zone, as an interservice organization with participation by the United States Public Health Service, Army, Navy, and Air Force. It was visualized as a tropical laboratory with a small resident staff where research workers of the uniformed services could find adequate facilities for short- or long-term studies on problems in tropical medicine which pertain specifically to their services.

There are two units now functioning at the Middle America Research Unit, viz: one on mycology and another on arthropod-borne virus diseases. The unit on mycology is staffed by personnel from the Walter Reed Army Institute of Research. The unit is concerned initially with studies on histoplasmosis. Intradermal tests are conducted on various population groups and soil samples are tested for the presence of the causative agent, *Histoplasma capsulatum*. No sustained studies have been made on histoplasmosis in the Republic of Panama or in the surrounding area, although there is evidence that the disease is of considerable public health and military importance.

The unit on arthropod-borne virus diseases is conducting serological surveys in the human population to establish the presence of antibodies to various virus diseases and to indicate past and recent experience with these diseases. Demonstration of current infections with arthropod-borne viruses will be attempted by isolation from patients suffering from fever of undetermined origin. Search for virus infection in arthropod vectors will be conducted through the use of sentinel animals and the attempted isolation of viruses from trapped insects and from the sentinel hosts. Search will be made also for reservoir hosts of arthropod-borne viruses among lower animals. Serological surveys are being conducted in Guatemala, where a member of the staff of the Middle America Research Unit is stationed, and where cooperative arrangements have been effected with the Pan American Sanitary Bureau and the Sanidad Publica of Guatemala.

The arthropod-borne virus research in the Canal Zone is correlated with studies at the National Institutes of Health at Bethesda, Md., where extensive facilities are available for work on the more fundamental aspects of the problem.

It is anticipated that other research problems will receive the attention of staff members of the Middle America Research Unit and that from time to time visiting investigators from the National Institutes of Health, Walter Reed Army Institute of Research, and the Naval Medical Research Institute will find it desirable to carry out studies at this laboratory.

THE GORGAS MEMORIAL LABORATORY

This laboratory is currently engaged in the following studies: Research on the epidemiology of yellow fever with field stations at Mandinga and Cerro Azul. Effort is being made to determine the extent of endemicity of yellow fever in the Republic of Panama, the role of mammals other than monkeys in the transmission of the disease, and the possible survival of yellow fever virus during the dry season in various mosquito vectors.

In the past, virus isolations have been attempted from mosquitoes collected in Guatemala and other areas through which the epidemic of jungle yellow fever progressed northward from Panama during recent years. It is understood that further studies of this nature will not be attempted. Studies have been made on the rickettsial diseases, such as Rocky Mountain spotted fever, murine typhus, and Q fever.

The epidemiology of leishmaniasis is being studied and research is being conducted on American trypanosomiasis or Chagas' disease. Such studies are mainly concerned with the pathology and the long-term effects, particularly on the heart, of this trypanosome infection.

Surveillance is still being conducted on malaria in certain Chagres River villages, where DDT residual spraying and drug studies have been carried out.

Taxonomic studies on various insects continue to receive attention and the insect collection at the Gorgas Laboratory is being augmented as time goes on.

COMPARISON OF RESEARCH PROGRAMS

The Middle America Research Unit is conducting mycological studies with which the Gorgas Laboratory is not concerned.

The arthropod-borne virus disease research at this Unit in no way conflicts with the yellow fever studies of the Gorgas Laboratory, since it is mainly directed toward virus diseases other than yellow fever, although from time to time it is possible that the Unit will be concerned with yellow fever research outside the field of interest of the Gorgas Laboratory.

The Middle America Research Unit is not engaged in the following research projects now receiving attention of the Gorgas Laboratory: Yellow fever in the Republic of Panama, leishmaniasis, American trypanosomiasis, malaria, taxonomic studies of various insects, and maintenance of insect collections.

Every effort has been made to avoid duplication in the Middle America Research Unit of work being done in the Gorgas Memorial Laboratory. Numerous officials of the uniformed services have conferred with the director and workers at the Gorgas Laboratory in an effort to avoid such duplication. As a matter of fact, every effort has been expended to make the studies of the two laboratories complementary. At the present time, as examples, the Middle America Research Unit is dependent upon the Gorgas Memorial Laboratory for assistance in entomological problems, for information concerning local fauna and flora, for library facilities, and for arranging necessary contacts with Republic of Panama officials and staffs of local hospitals. The Gorgas Memorial Laboratory benefits from the presence of the Middle America Research Unit in a number of ways, including the stimulating contacts with other scientific workers, the opportunity of observing and learning newer techniques in the study of arthropod-borne viruses and fungous diseases, and the availability of a tissue culture laboratory with all of the most modern facilities. Cooperation between the two laboratories has been very close and has already demonstrated the fact that the work of the one is complementary to the work of the other.

THE NEED FOR THE MIDDLE AMERICA RESEARCH UNIT

The Gorgas Laboratory was designed as an international memorial to Gen. William Crawford Gorgas and it was intended that it would be financed by annual contributions from all of the American Republics. The Republic of Panama has provided the land and the buildings but the laboratory is financed largely through a congressional appropriation of $150,000 contained in the budget of the National Institutes of Health with the addition for the current fiscal year of certain grants-in-aid from the latter institution totaling approximately $76,000.

The Gorgas Laboratory is not located on United States territory nor is it subject to direction by any of the organizations interested in the Middle America

Research Unit. Experience has demonstrated that there are certain difficulties from the standpoint of space and equipment required for special studies in supporting research workers from the uniformed services in the Gorgas Laboratory. Relations have been invariably cordial, but this laboratory is a private institution and the transfer of public funds for the maintenance of Government workers is difficult.

The uniformed services find themselves in need of a tropical laboratory under their control in an area within the jurisdiction of the United States Government. The National Institutes of Health has long experienced the necessity for such a laboratory to supplement its basic research facilities at Bethesda, Md., with opportunities for the study of tropical diseases in an endemic area. Previous experiences with temporary and inadequate facilities in foreign countries have been far from satisfactory.

Other research organizations, both public and private, have felt the need for specially equipped laboratory facilities to study tropical problems. As an example, the Rockefeller Foundation has maintained for years a laboratory in New York City for the study of virus and other tropical diseases, but the work of this laboratory has been supplemented by field laboratories in other parts of the world where the diseases under study are prevalent. Similarly, the Army and the Navy have established laboratories overseas to study the exotic and potentially cosmopolitan diseases occurring in certain areas.

The Middle America Research Unit will provide facilities for the training in tropical medicine of members of the uniformed services who will be able to carry into other tropical areas the findings of the research program of the Unit.

The public health importance of tropical diseases in Middle America is of such magnitude and the facilities for investigation of the problems so meager that the addition of another laboratory to the area should materially hasten the control of these diseases, many of which serve as a constant threat to the continental United States.

The Middle America Research Unit represents an exploratory effort toward a solution of a problem long faced by the uniformed services. Its operations will be subject to evaluation from time to time and its future determined largely by the criteria of its productiveness and its fulfillment of the needs which led to its establishment.

It is believed that the special interests and objectives of the two laboratories will be best served by maintaining each as separate but complementary operations rather than by enlarging either to meet the needs of both.

Background Statement on the Middle America Research Unit

On October 16, 1957, a final agreement between the Department of the Army, the Panama Canal Zone Government, and the Department of Health, Education, and Welfare became official, thus authorizing a field research party in the Panama Canal Zone for a period of 3 years. This is known as the Middle America Research Unit (MARU). It is administered as a field section of the Laboratory of Tropical Diseases, National Institute of Allergy and Infectious Diseases.

Construction and alterations in temporary facilities (former nurses' quarters, Gorgas Hospital, Ancon, C. Z.) is underway with the cooperation of the Panama Canal Company, an independent agency of the United States Government. A nucleus staff, including administrative and professional people, is now working in the Canal Zone. Dr. Alexis Shelokov, NIAID virologist, heads the Middle America Research Unit. He will be joined shortly by scientists and supporting personnel from the NIAID and from the Walter Reed Army Institute for Research.

This report on an interagency research unit is supplementary to the information appearing under "Arbor Viruses" in the opening statement by the Director, National Institute of Allergy and Infectious Diseases, for inclusion in the record of the House Appropriations Committee hearings, 1959 NIAID budget estimate.

BACKGROUND TO ESTABLISHMENT OF THE UNIT

Since the health problems of the Central American area are potentially important to civilian health of the southern United States and other areas and are generally applicable to problems of the military forces in the tropics, representatives of several interested agencies of the Government were designated to explore the desirability and feasibility of establishing a research project concerned with disases of Pan America and to seek a location for it. Representatives from United States Public Health Service, Army, Navy, and Air Force, the Canal Zone Govern-

ment, Gorgas Memorial Laboratory (Panama), and the Rockefeller Foundation (Trinidad) conducted field surveys and evaluated various proposals for research on the important but little-understood diseases.

On February 18, 1957, this group drafted a report recommending, in general, (*a*) that there is need for expanded research on medical problems of Pan American importance; these should be met by a joint effort of governmental health agencies centered in a laboratory located in the Panama Canal Zone; (*b*) that a medical research institute should be established under the jurisdiction of the Governor of the Panama Canal Zone and under the primary cognizance of the Surgeon General of the United States Public Health Service for the purpose of studying diseases of importance to the Americas; (*c*) that the proposed laboratory should be established on the Pacific side of the Canal Zone, possibly in the former Clayton Army Hospital, and housing for scientific and ancillary personnel should be made available.

The purpose of the field study during the initial stages is to evaluate the research potential and health problems of a tropical area. The approach will be on a broad front in the field of biology (including, for example, mycology, entomology, mammalogy, ornithology, ecology, and epidemiology), but more specifically to apply recent technical advances and medical discoveries to research on tropical anthropod-borne diseases. It is planned that this evaluation will be completed during the 3 years of study and at that time a complete and thorough review will be made. Depending upon this appraisal, a decision on the future status of this activity—as to whether it should be continued, expanded, or abandoned—will be made. The evidence presently available indicates that permanent facilities should eventually be constructed. Considerations being given to building a new Gorgas Hospital in this area will undoubtedly have a profound effect on any plans for permanent laboratory facilities. It is conceivable that the Middle America Research Unit, while independently administered, might be a part of a tropical disease clinical and laboratory research center, working in coordination with the Gorgas Hospital complex.

THE GORGAS MEMORIAL LABORATORY

The Gorgas Memorial Laboratory, research branch of the Gorgas Memorial Institute of Tropical and Preventive Medicine, is located in the Republic of Panama, whereas the Gorgas Hospital is located within the Canal Zone. Research by this laboratory, which has been aided by a grant from the United States Government each year since 1929, has developed medical information of broad value to world health and has pointed to the necessity for expanding studies in Middle America. The work of the Middle America Research Unit will supplement and in no way interfere with or duplicate the investigations of the Gorgas Laboratory. Every effort will be made to coordinate the work of the two groups.

FINANCIAL SUPPORT FOR MARU

During fiscal year 1956, a total of $15,435 was expended on initial surveys related to the Middle America project. In 1957, the amount was $17,860. The estimate for fiscal year 1958 is $78,000; and an increase of $90,000 over the 1958 figure will be needed to operate the Unit for the full 1959 fiscal year.

THE ARBORVIRAL PROBLEM

The Middle America Research Unit will close the last gap in the belt of world-girdling tropical and semitropical stations for research on arborviral and other local infections. The arborviruses, or arthropod-borne viruses, will be the main target for research. Virus diseases in this group, including for the most part infections transmitted by mosquitoes, and also by ticks and other arthropods, have been said to represent the "dark continent" of medical research.

A number of arthropod-borne encephalitides (some cause paralysis and may be fatal), yellow fever, dengue, and sandfly fever are examples of virus diseases spread by insects of the arthropod group.

With the development of more sensitive methods of isolating viruses in tissue cultures and broad advances in virology, the arthropod-borne types have been increasingly implicated in human diseases, such as the central nervous system impairments associated with epidemics of mosquito-borne Western, Eastern, or St. Louis encephalitis in various areas of the United States, or the recently discovered hemorrhagic Kyasamur Forest disease in India, presumed to be transmitted by ticks.

The Middle America region of the Western Hemisphere, including Mexico and Central America and the islands of the Caribbean Sea, is one of the tropical areas which provide breeding spots and natural reservoirs for the arborviral infections that constitute a considerable threat to public health throughout the entire Western Hemisphere. The Panama Canal Zone provides an ideal location for the field laboratory being established by NIAID in cooperation with other agencies.

While arborvirus diseases are not limited to tropical areas, these areas may serve as sources of infection ultimately reaching temperature zones. It is doubtful, for example, whether overwintering of certain of the viruses in their mosquito hosts in the colder regions of the United States is important in maintaining the virus from year to year. The view has often been expressed that the real reservoir of these viruses is in the tropical and subtropical regions and that infected birds may carry them northward during migration. At the Communicable Disease Center, Atlanta, Ga., preliminary tests seeking to isolate viruses from migratory birds returning north from the tropics gave no indication that such birds did indeed contribute to the spread of the viruses, but more work is required.

In recent years, bats have been found widely infected with rabies virus and these mammals can survive infection with encephalitis virus without obvious illness.

Certainly in yellow fever and dengue the reservoirs of virus are in tropical and subtropical regions. Mosquitoes capable of spreading yellow fever can also be found in cities of the Southeastern United States. *Aedes aegypti*, urban vector, is prevalent, and *Haemagogus equinus* has been collected. Concern exists that the wave of jungle yellow fever that has now approached southern Mexico after a gradual expansion northward through Central America may extend ultimately to this country.

During the NIAID Guatemala work, the ecology of yellow fever vectors was studied and material for colonizing certain species of Haemagogus mosquitoes was obtained in Guatemala. Colonies have been established in the Bethesda. Md., laboratories of NIAID.

The Middle America Reserch Unit is located in an area providing a vantage point for the study of a number of diseases which are abundant and vigorous in tropical zones and also have considerable impact upon the health and economy of North and South America. The full dimension of the problem is not yet known. This is one of the reasons for research on the arborviral diseases.

The rationale for tropical disease research by the Public Health Service is outlined in more detail in National Institutes of Health Research Progress Report No. 69, March 1957, Tropical Disease Research, which is available from the NIH through the Publications and Reports Section, Scientific Reports Branch.

RELATED GRANT-SUPPORTED STUDIES

Institute grant support to investigators in universities and medical centers throughout the United States is extensive in scientific areas of disciplines which will be employed at MARU for study of local medical problems. In entomology, the NIAID has 63 active grants in fiscal year 1958, totaling $489,653; in virology, 166 grants for $3,039,384; and in mycology (fungus diseases), 62 grants for $560,328.

IMMEDIATE DEVELOPMENTS

At its present stage of development, the Middle America Research Unit is involved in establishing the physical requirements of a laboratory which is to deal with pathogenic viruses and fungi. Somewhat more than half the fiscal year 1958 funds is devoted to this purpose. Since the present facility is temporary, every effort is being made to keep costs to a minimum through the use of borrowed or surplus equipment and materials.

Recruitment of competent professional people to work with the project does not, thus far, seem to offer any insurmountable difficulties, since the challenge of this relatively unexplored area of infectious diseases attracts people of high professional caliber.

Research studies will get under way at MARU in the near future. During fiscal year 1959 the staff will reach a total of 3 scientists, 5 subprofessionals, and 10 supporting personnel. This will provide staff for a virus research laboratory and a mycology research laboratory, as well as administrative and service support.

GORGAS MEMORIAL LABORATORY

Dr. SHANNON. I might point out, Senator Hill, that the appropriation that covers the Gorgas Memorial Laboratory is also contained within this appropriation.

Senator HILL. I appreciate that fact. It has been there for some several years, I know. It used to be under the State Department, but it is all here now, as you say, Doctor.

Incidentally, it is a very small amount of money.

Dr. ANDREWS. $150,000, which, incidentally, is the same amount of funds for the support of this other laboratory as well. I think that is purely by chance, but they happen to be the same amounts.

Senator HILL. You mean the same amount is appropriated for both laboratories?

Dr. ANDREWS. That is right.

Dr. SHANNON. Dr. Andrews, that is not entirely true. The amount for the Panama Unit is $150,000. The stable amount for Gorgas Memorial is $150,000, but in addition they have received sizable sums in the form of research grants, over and above the statutory limitation.

Senator HILL. You mean Gorgas?

Dr. SHANNON. Yes, sir.

Senator HILL. Yes, I understand that.

MALARIA ERADICATION PROGRAM

Dr. ANDREWS. The third program commenced this last year is an exploration of the possibilities of mass treatment for malaria.

I am sure that members of this committee are aware of the worldwide malaria eradication program sponsored and directed largely by the World Health Organization, with the assistance of the International Cooperation Administration, and the United Nations Children's Emergency Fund.

Senator HILL. Could you supply us with information as to how much of the United States funds are going into this work you just spoke of?

Dr. ANDREWS. We can supply it for the record.

Senator HILL. Will you supply it for the record, please? It might be helpful.

Dr. ANDREWS. We will supply it.

(The information referred to follows:)

United States funds appropriated or donated for worldwide malaria eradication activities in 1958

Mutual Security Act of 1957, Public Law 85–141:	
Sec. 420: International Cooperation Administration	[1] $23,300,000
Sec. 406: United Nations Children's Fund (committed $8.4 million, of which 52.5 percent are United States-provided)	4,426,000
Sec. 306 (a): United Nations Technical Assistance (committed $881,000, of which 45 percent are United States provided)	396,000
Public Law 643, 80th Cong.: World Health Organization (committed $692,000, of which 33.3 percent are United States-provided)	230,000
Treaty authority, Pan American Sanitary Code, 1924: Pan American Sanitary Organization (committed $89,000, of which 66.6 percent are United States-provided)	59,000
Total	28,411,000

[1] Of this amount $5 million was transferred to World Health Organization and $2 million to Pan American Sanitary Bureau for overseas malaria eradication.

Local counterpart funds belonging to the United States of America and accumulated as the result of foreign purchases of United States commodities as authorized under Public Law 480 were proposed in hearings on the bill (p. 586) as "loan capital" for worldwide malaria eradication in the amount of $12.9 million in Public Law 85–141. While $23.3 millions is specified as a limitation of funds available to ICA for malaria eradication activities in 1958, it is understood that authority has been requested to use counterpart funds, as indicated above, in case the appropriated funds are not adequate to support all the useful work which could be accomplished in fiscal year 1958.

Furthermore, in addition to the funds identified above, substantial portions of the time of headquarters and regional personnel in the WHO and PASB are devoted to malaria eradication planning, evaluating, and the processing of necessary administrative details. The cost equivalent of this time is not available for WHO, but for PASB it is estimated to be approximately $361,000 for fiscal year 1958.

Dr. ANDREWS. It is planned that this malaria eradication project will be accomplished largely by the use of insecticides sprayed on the interiors of the homes in areas where malaria occurs. This presents real difficulties in various parts of the world as some people do not live in houses that have enough surface within them to spray anything on. They may have only four supporting poles and a thatched roof overhead. In some instances mosquitoes which transmit malaria do not fly into the houses, but do their biting outside; consequently, they do not rest within the houses and cannot come in contact with insecticides sprayed on interior surfaces.

DEVELOPMENT OF RESISTANCE TO TRANSMITTERS

The most troublesome problem, however, is that in the course of 2 or 3 years' experience with these insecticides, some of our more effective mosquito transmitters of malaria have accommodated themselves to these residual insecticides and have acquired an effective resistance to them which keeps the insecticides from killing them. This is, of course, in principle, the same problem which occurs in agriculture with respect to the crop pests which become resistant to the insecticides used for their destruction, and it is also comparable to the problem about which I would like to speak later, in communicable disease control, where we find that certain organisims which cause serious disease also become resistant to the antibiotics which are currently used to treat them.

So we need something more than residual insecticides to make worldwide malaria eradication really effective. What we are looking for is a chemotherapeutic material which is effective, which is cheap, and, most of all, which does not generate a resistance to itself, so that it will remain effective for long periods of time.

As you have already noted, there is a very considerable United States taxpayers' interest in this project, from the standpoint both of appropriated funds and donated funds, because some of the organizations which are providing support for this activity obtain this largely from donated sources.

Those are the three new programs that we have underway.

PROBLEM OF STAPHYLOCOCCAL INFECTION

I want to call your attention to another problem area about which you may be familiar, but it is certainly well worth reemphasizing,

and that is the increasing major infectious disease problem of staphylococcal infections in hospitals.

Senator HILL. This has been very much on the increase, has it not?

Dr. ANDREWS. Yes, indeed.

Senator HILL. What is that due to, Doctor?

Dr. ANDREWS. The bacteria which cause these infections are known as staphylococci. Staphylococci are small, spherical germs. The Greek word, "coccus" means "berry," and these germs are berry-shaped organisms which are usually found in clumps or clusters like bunches of grapes, which is what the first part of their name refers to. They occur ubiquitously and are more familiarly known as the cause of boils and abscesses.

Of course, the appearance of staphylococci in hospitals is nothing new; they have been introduced there repeatedly for years, but there is now a most formidable complicating factor, which is that the treatment of staphylococcal infections with antibiotics, so successful in the past, is becoming less and less effective.

IMMUNITY TO ANTIBIOTICS

Senator HILL. You think that the germs are building up some sort of immunity to these antibiotics, so that they do not have any effect any more?

Dr. ANDREWS. Yes, sir. I think that many of these germs have become resistant to these previously effective substances.

The infections caused by these organisms involve not only the patients but the staff, and of course, the general hospital environment. They have been particularly notable in the nurseries, where there have been numerous outbreaks of disease and death, and in the obstetrical, surgical, and medical wards as well.

We have heard of these developments for several years from British, Canadian, and Australian medical literature, but they are now becoming increasingly prominent in this country. The sources of infection, of course, are the open infected wounds which have to be treated in hospitals, purulent discharges, draining sinuses, and skin lesions. The skin of some infected babies may be literally covered with infllammatory discharge. All of this leads to what is perhaps of even greater importance from the standpoint of transmission; namely, the development of healthy carriers of these organisms among the medical, nursing, and other attendants working in the hospitals. Staphylococci can multiply in their nasal and oral passages without causing overt disease. They are disseminated from these foci to the ambient air and to patients, other attendants, bedding, blankets, clothing, and instruments by sneezing, coughing, and fingers.

In one hospital, there was an interesting series of cases which appeared to originate in the operating room, it was found that the common source was the anesthesiologist, a healthy nasal carrier. From the very nature of his work, he was obliged to be close to the face of each anaesthetized patient, and unknowingly, of course, transmitted his staphylococci to them by means of his breath.

Dust contamination can be controlled to a certain degree by the oiling of floors and by careful sweeping, but particulate matter is usually stirred up enough to produce more air contamination and

settling of staphylococci on persons, beds, and so forth. Contact transfers are common, particularly from babies to their mothers and perhaps vice versa, so that the mothers may suffer painful inflammation of the milk ducts and glands, and may develop breast abscesses which have to be opened and drained.

NEED FOR STRICTER ASCEPTIC TECHNIQUES

The correction of this problem will not be easy. It is believed that the present dangerous dilemma in which we find ourselves is due in part to relaxation in aseptic techniques made possible by extensive antibiotic prophylaxis. Informed opinion is that the more austere and strict aseptic techniques which prevailed in the past should be reestablished, and such practices as crowding beds and cribs, and mixing infected and non-infected patients should be abandoned. Lastly, antibiotics should be used more judiciously.

The number of cases and deaths resulting from staphylococcal infections in hospitals is not known. Death certificates usually fail to reveal antecedent causes and, of course, cases are not always reported routinely.

I would like, however, to give you one example of a study was made, and it is from these surveys that we get our best information regarding incidence of morbidity and mortality.

This was made in a 350-bed hospital in the northwest part of the country. During 3½ months, 189 cases of hospital-connected infections were investigated.

One hundred of these cases appeared while the patients were being hospitalized.

Thirty-two of them developed within 60 days after they had left the hospital, which presumably was where they had become infected.

Fifty-seven of them were acquired before admission and this introduced infection into the hospital.

There were 24 deaths in which staphyloccocol infections were said to be contributory.

It may be misleading to translate these figures to larger populations, but it is interesting to see that if the rates in the hospital for 3½ months were to prevail for a year, there would have been 456 cases and 76 deaths. This would be more than equal to the poliomyelitis cases and deaths in the State where this occurred.

So, when you multiply this experience by that of many other hospitals throughout the length and breadth of this land staphylococcal infection is obviously a very important health problem.

We are undertaking in our Institute, research on staphylococcal disease both intramurally and extramurally. We are supporting at present 19 grants in the amount of over $220,000 on various aspects of staphylococcosis and drug resistance to it. More research needs to be done, we feel, in determining the differences between the antibiotic-resistant and the antibiotic-sensitive strains of these organisms.

As a matter of fact, a meeting is being held today in the Surgeon General's Office with representatives of the American Hospital Association, to discuss this general problem, and to see what can be done about it.

Senator HILL. Then you are giving primary attention to it?

Dr. ANDREWS. Yes, sir.

The remainder of our activities concerns programs which are noted in our Research Highlights and other statements, which have been supplied to you, for insertion in the record if you desire. Thus it will be unnecessary to say anything further about them. I will be happy to answer any questions which you desire to ask.

(The statements referred to follow:)

RECENT ADVANCES IN ALLERGY AND INFECTIOUS DISEASES, JANUARY-MARCH 1958

ITEMS OF INTEREST ON PROGRAM DEVELOPMENTS AND RESEARCH STUDIES CONDUCTED AND SUPPORTED BY THE NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

Survival of encephalitis virus in mosquitoes

A grantee of the National Institute of Allergy and Infectious Diseases has isolated the virus of western equine encephalitis from mosquitoes during all months except December. The winter strains did not have the same capacity to produce disease as the summer ones.

Dr. W. C. Reeves and associates of the University of Califorinia, Berkeley, in a 3-year study of mosquitoes in a highly endemic area for western equine encephalitis and St. Louis encaphalitis, demonstrated the presence of western equine virus in *Culex tarsalis* mosquitoes in all months except December.

Western equine encephalitis and St. Louis encephalitis are acute inflammatory diseases of the brain and spinal cord, caused by two different viruses. Mosquitoes (particularly *Culex tarsalis*) are considered the chief vectors of these diseases, but whether the reservoirs of these viruses are in mosquitoes or other arthropod vectors, or in vertebrate hosts such as birds, is not known.

The detected seasonal occurrence of these viruses in *C. tarsalis* mosquitoes was markedly different . Western equine virus was isolated during all months except December, which is a minimal blood-feeding period. The peak incidence of western equine was from May to July, while St. Louis predominated in August and September. In only one specimen from a "winter" month, March, was St. Louis virus detected. This paucity of isolations, the investigators suggest, may be due to the lower pathogenicity of St. Louis virus compared with western equine, in laboratory animals, or to the overwintering of this virus in a different way.

Tests provided ample evidence that the winter strains of western equine virus were not capable of the same disease-producing effect in mice and embryonated eggs as the summer strains, and did not elicit as much antibody response in chickens.

The presence of virus in *C. tarsalis* was found to correspond closely with the seasons of blood feeding by this mosquito. This, the investigators report, supports the hypothesis that a vertebrate host may have a western equine infection lasting a number of months making the virus available to the mosquito when it takes blood from such a host. Birds are probably the host, since 98 percent of the engorged mosquitoes collected from January to May contained nucleated red blood cells.

In summarizing their field study, the California group cautioned that "despite the abundance of winter isolations from *C. tarsalis* it would be premature to conclude that overwintering females of the species are the proven reservoir of infection. * * * The possibility that a vertebrate host is the immediate source of wintertime vector infection is as likely as the alternative that virus survives solely in the vector in winter."

The middle, America research unit

A laboratory being established by NIAID in the Panama Canal Zone will explore problems of tropical diseases, particularly arthropodborne viral infections. The Army will cooperate. These diseases represent important pan-American public health, military, and economic problems.

After field surveys by representatives of the Public Health Service, Army, Navy, Air Force, Canal Zone Government, Gorgas Memorial Laboratory (Panama), and Rockfeller Foundation (Trinidad) a final agreement between the Department of the Army, Panama Canal Zone Government, and the United States Department of Health, Education, and Welfare authorized a field research party in the Panama Canal Zone for 3 years. This Middle-America Research Unit is a section of the Laboratory of Tropical Diseases, NIAID.

The Middle-America Research Unit will close the last gap in the belt of world-girdling tropical and semitropical stations for research on arborviral and other infections. Arborviruses (arthropod borne) will be the main target of research, representing for the most part infections transmitted by mosquitoes, and also by ticks and other arthropods. A number of encephalitides, yellow fever, and dengue are examples of virus diseases spread by arthropods. Infections of this type have been increasingly implicated in human diseases, such as the central nervous system impairments associated with epidemics of mosquito-borne western, eastern, or St. Louis encephalitis in various areas of the United States, or the recently discovered hemorrhagic Kyasanur forest disease in India, presumed to be transmitted by ticks. Jungle yellow fever, still advancing northward through Central America, is a particular concern. Colonies of mosquitoes of types host to this disease are now being raised by NIAID in Bethesda.

Construction and alterations in temporary facilities (former nurses' quarters at Gorgas Hospital, Ancon, C. Z.) are underway. A nucleus NIAID staff overseeing the work was recently joined by Dr. Alexis Shelokov, Institute virologist, who heads the Middle-America Research Unit.

Studies are expected to begin in the near future. NIH scientists and one from Walter Reed Army Institute of Research will staff the Unit. After the initial 3-year period, an appraisal will be made to determine whether permanent facilities should be established.

Salivary-gland virus observed

Virus has been detected in mouth swabs of up to 10 percent of apparently healthy children in nursery, and for prolonged periods, but not in newborn infants or adults. Virus excretion was closely correlated with the presence of serum antibody. Virus was present in urine about as frequently as in the mouth.

Seeking to elucidate the epidemiology and clinical importance of human salivary-gland virus infections, the National Institute of Allergy and Infectious Diseases has made longitudinal and cross-sectional surveys of virus excretion and serum antibodies various population groups. A simple technique for detection of salivary-gland virus in the mouth and urine has been devised, using specific cytopathogenic changes in tissue culture as an indicator.

NIAID scientists Wallace Rowe and Janet Hartley, Laboratory of Infectious Diseases; Henry Crablett, Laboratory of Clinical Investigation; and Frank Mastrota, a part-time pediatrician with NIAID and the District of Columbia Department of Welfare, studied salivary-gland infection in 108 newborn infants; 47 children aged 8 months to 4 years in a District of Columbia nursery; and 26 adult personnel of NIH. All subjects were apparently healthy.

Salivary-gland virus was detected in mouth swabs and urine of up to 10 percent of the nursery children, and for prolonged periods. No virus was recovered from newborn infants or adults. The virus was recovered only from children who had shown complement-fixing antibody to salivary-gland virus and was never isolated from any of the more than 50 percent of children who had no demonstrable titer. Studies of several virus-positive children at the Clinical Center showed some abnormalities, but these were not definitely attributable to the virus infection.

The detection of virus in mouth swabs for periods of 2 to 5 months, and as long as 8 to 24 months after antibody was known to be present, substantiates the chronicity of the infection of the salivary glands. Detection of virus in mouth and urine many months after CF antibody was known to be present suggests that the infection was present over the entire period, since the existence of multiple serotypes of salivary-gland virus which might reinfect has not thus far been indicated.

Since the virus-positive children possessed specific antibodies on admission, it is probable that recovery of the virus was indicative of experience in the general population, and that at least 10 percent of the children in this age and socioeconomic group are shedding salivary-gland virus. This figure is in agreement with the frequency of characteristic inclusions in the cells of salivary glands of young children dying of all causes.

The studies provide laboratory confirmation of the chronicity and high prevalence of subclinical salivary gland infection, and suggest that persistent urinary tract infection occurs with nearly equal frequency. The data being assembled will be pertinent to future studies to assess the full potential of salivary-gland virus in disease.

Bacterial allergy (staphylococcal) studied

Some symptoms observed in patients may result from hypersensitivity to bacteria. Foremost among suspects are prevalent staphylococci. NIAID grantees demonstrate allergenic activity of staphylococci fractions.

While many investigators explore resistance of staphylococci to antibiotics, another aspect of these bacteria—their possible allergenic effect—is under study by NIAID grantees S. M. Beiser and Murray Dworetzky and associates at Columbia and Cornell Universities. Because of their ubiquity, staphylococci have been foremost among suspects.

In laboratory studies, the investigators believe they have demonstrated in pooled human gamma globulin the staphylococcal antibodies significant in allergy. They also reported that invasiveness or pathogenicity of a strain of staphylococcus may be associated with its ability to sensitize humans, as indicated by bands around reactive sites of various staphylococcal filtrates in agar preparations of pooled human gamma globulin.

In additional research, skin response to polysaccharide fractions from staphylocolli were more frequent in allergic than in normal persons.

Protein fractions produced hypersensitivity in guinea pigs. A segment of intestine from a guinea pig which had received sensitizing staphylococcal injections was isolated and attached to a kymograph to give a written record of longitudinal contractions of the intestine tissue, as an indication of allergic response. The segment was challenged with various fractions of staphylococci in the presence of pooled human gamma globulin. (The gamma globulin was found to suppress any primarily toxic reaction. Nucleprotein fraction from *S. albus* was more allergenic than that from the *S. aureus* strain. A more comprehensive understanding of staphylococcal diseases should derive from continuing studies of their allergic aspects.

Purifying viruses

A relatively simple new method of purifying viruses may expedite research on these smallest of microbes. It provides practical quantities, refined and fully infectious, for further studies of their role in health or disease.

A new virus purification technique has been demonstrated by scientists of the National Institute of Allergy and Infectious Diseases, Rocky Mountain Laboratory, Hamilton, Mont., working with investigators of the Carnegie Institution of Washington, in Washington, D. C., and at Yale University. They showed that column chromatography with cellulose ion-exchange chemicals, as employed in the purification of proteins, is applicable to separating viruses and other very small microbes from adherent contaminating materials. A marked degree of purification was achieved even with polioviruses, which are so small that about 2,500,000 are required to measure 1 inch.

In column chromatography, the particulate material is washed down a column, such as a glass tube, containing adsorbing chemicals. The different particles have various affinities for the chemicals in the column and flow out at different rates, thus being separated.

The method was used for purification of poliomyelitis (Mahoney, type 1 and Saukett, type 3), vaccinia, ECHO (type 13) and Coxsackie (type A9) viruses from concentrates of monkey-kidney tissue-culture fluids in which the viruses had been grown. Concentrates of Q fever and epidemic typhus fever rickettsiae (microbes larger than viruses but smaller than bacteria) from chick-embryo yolk sacs, and of Colorado tick fever virus in brain homogenate from infected mice, were also examined.

Visualization of the purified microbes with the electron microscope verified the success of the new method. For example, the rickettsiae of Q fever, a disease of livestock transmissible to man, were revealed free of extraneous matter at a magnification of about 88,000 times. They appeared as well-defined particles consisting of outer cell walls enclosing fluffy, light protoplasmic material.

In studies of bacteria, the cell wall has been found to contain the chemical fractions which, when used in vaccine, may protect against disease, while the protoplasma sometimes contains irritants and sensitizers. Purification of microbes and subsequent fractionation are important in research on immunology.

Some viruses were prepared from tissue cultures grown in the presence of radioactive phosphorus (P^{32}), and correspondence between virus activity and radioactivity indicated that even very small animal viruses can be labeled in this manner.

The investigators are Bill H. Hoyer, Daniel B. Ritter, Richard A. Ormsbee, and Carl L. Larson of the Hamilton, Mont., Rocky Mountain Laboratory, National Institute of Allergy and Infectious Diseases; Ellis T. Bolton, Carnegie Institution; and George LeBouvier, a research fellow of Yale University. Cellulose ion-exchangers for purification of proteins were introduced 2 years ago by Drs. E. H. Peterson and H. A. Sober of the National Cancer Institute.

Malaria program supports worldwide eradication efforts

Large United States investment in worldwide malaria eradication is the rationale for accelerating malaria research, basic and developmental, of the National Institute of Allergy and Infectious Diseases.

Malariologists once thought control the only realistic goal against the disease, but recent success in eliminating malaria from entire areas through the use of newer insecticides makes eradication seem a more feasible objective today. Large sums have been appropriated by Congress for WHO, ICA, PASB, and UNICEF worldwide malaria eradication efforts. To implement this work, broad objectives have been set for an accelerating 5-year program of basic and developmental malaria research by NIAID's Laboratory of Tropical Diseases.

Cheap, effective, nontoxic drugs are needed. These should be adjunctive to or substitute for residual sprays where malaria vectors are insecticide-resistant: where the vector is an outdoor type that cannot be reached by spraying habitation; or where local mores or logistic problems greatly interfere with application of insecticide.

Mass chemotherapy with these drugs would create a chemical barrier against patent malaria by subduing the parasite in the blood. NIAID malariologists have played an important role in the development and testing of generally effective drugs, including primaquine, chloroquine, and pyrimethamine. Therapy with drugs of these types may be improved. New methods of administering them must be devised for worldwide eradication programs. For example, certain drugs must be released slowly into the blood stream so that their antimalarial action will persist and prevent transmission of infective sporozoites. In some areas it may be most feasible to combine antimalarials, such as chloroquine or pyrimethamine, with table salt to provide a routine dietary method of administration. Drugs should be studied to determine the most effective combinations, with detoxifying agents added where they will permit a more massive dose. The drugs employed should not produce drug resistance.

Effects of antibiotics on nutrition in man

A Harvard investigator reports on role of intestinal bacteria in the metabolic changes produced by antibiotics administered to undernourished adults.

Dr. Maxwell Finland, NIAID grantee, in collaboration with a group of Harvard Medical School researchers, gives results of a 3-year nutritional study of undernourished men given relatively large oral doses of tetracycline drugs (aureomycin, and terramycin) and polypeptide antibiotics (bacitracin plus polymyxin). The metabolic effects observed in the patients on tetracycline therapy were losses of body weight, increased urinary excretion of riboflavin and nitrogen, increased concentration of nonprotein nitrogen in the serum, and resultant negative or reduced positive nitrogen balance. The polypeptide antibiotics produced marked changes in fecal flora but no metabolic alterations.

The bacterial flora changed in all the patients during administration of the antibiotics but differed considerably in each patient.

The seven men selected for this study gave prior histories of inadequate dietary intakes with accompanying weight loss, and displayed physical evidence of undernutrition. This condition was confirmed by gains in body weight and positive nitrogen balances upon provision of adequate intakes of food. They were each given a constant diet of at least 75 grams of protein and 2700 calories daily, were maintained on a metabolic ward, and were ambulatory.

The antibiotics used in this study were given 4 times a day in oral doses of from 20 milligrams to 3.0 grams for aureomycin, 2.5 grams of terramycin, and 100,000 or 150,000 units of bacitracin and 500 milligrams of polymyxin B sulfate. Patients were observed for 9 days prior to, during, and after therapy.

Fecal excretions of vitamins were not altered in any consistent direction during the antibiotic therapy; but increases in the urinary excretion of these amino acids—tryptophane, histidine, and threonine—were associated with aureomycin administration. The magnitude of increases, however, was not great enough to be of nutritional significance.

The character of the stools changed during administration of the antibiotics, becoming heavier and bulkier and containing an increased amount of undigested food particles and fibrous material. These changes, the investigators report, suggest that the antibiotics may interfere with digestive processes of the intestinal tract in some way not related to action of bacteria.

The bacterial organisms most frequently found in the feces were coliforms (*Escherichia coli* and *Aerobacter aerogenes*), enterococci, *Bacillus subtilis*, and clostridia (*Clostridium welchii*). During or after treatment, those most frequently appearing were hemolytic *Micrococcus pyogenes* var. *aureus* (coagulase-negative), Proteus, and yeasts (*Candida albicans*). Clostridia were markedly decreased in number or entirely absent in 5 of the 7 patients during antibiotic therapy. Organisms that first appeared in the stools after antibiotic therapy started were usually markedly resistant to the drug that was given.

In summarizing their study, the researchers suggest that the tetracycline compounds may exert their metabolic effects directly on the tissues rather than indirectly through their influence on the normal bacterial flora of man. They also point out that since there is a close relationship between riboflavin and the metabolism of tissue protein, it is possible that the increases in urinary riboflavin excretion are related to the increases in urinary excretion of nitrogen.

Nutritional requirements of cells

Thirteen amino acids, the building blocks of protein, are required by animal and human cells from normal and cancerous tissue for survival and growth in tissue culture—a method used to observe the complex processes of cells outside the body. This is five more than are essential for man.

Dr. Harry Eagle of the National Institute of Allergy and Infectious Diseases presents four possible explanations for the increased amino acid needs of these cells over those of man.

One possibility is that the enzymatic mechanisms which permit the biosynthesis of the five amino acids may have been lost through hundreds of generations of rapid growth in the test tube. Another is that the cells have a limited capacity for biosynthesis, which is sufficient for maintenance and nitrogen balance but not adequate for the rapid growth characteristic of cell cultures. The third possibility is that cultured cells retain the capacity to synthesise these five amino acids, but it is not evidenced for lack of appropriate building blocks. And the fourth is that these five amino acids may also be needed by most body cells, but may be supplied either by the action of the intestinal flora on the other amino acids or by the metabolic action of, for example, the liver, producing enough of the amino acids to supply the body's needs for nitrogen balance.

Examination of monkey kidney cells in first culture passage within 48 hours after their isolation from the animal host revealed that they needed at least 12 of the 13 amino acids required by long-term cell cultures, and it would therefore appear that the biosynthetic mechanisms are not lost through rapid growth in the test tube.

The limited capacity of the cell cultures was observed by Dr. Eagle and his associates in the biosynthesis of the amino acid, glutamine. Although these cells could synthesize glutamine from glutamic acid and ammonia, the amount was not sufficient for growth.

In the biosynthesis of cystine, it was found that these cells could not convert L-methionine into cystine, as the whole animal does; but a number of inorganic sulfur compounds could be used for the synthesis of that amino acid in cultures and could sustain the growth of the cells in a cystine-free medium.

Preliminary evidence indicates that the primary function of all but one (glutamine) of the essential amino acids in cell cultures appears to be their utilization for direct incorporation into protein. Glutamine is actively metabolized. Over and above its direct utilization for protein synthesis, it is converted to glutamic acid, aspartic acid, asparagine, and proline, and to a limited degree, glycine, serine, and alanine. It is also heavily used for the synthesis of the genetic material of the cell, the nucleic acids.

For polio virus synthesis, recent experiments in Dr. Eagle's laboratory reveal that cells require the presence of a full complement of amino acids within the cell. A vitamin B_6 deficiency caused a striking reduction in the capacity of the cells to make polio virus, and this deficiency resulted in the depletion of such amino acids as glycine, serine, alanine, and proline in the cell pool. The capacity of the cells to produce virus was completely restored upon the addition of these amino acids, in the continuing absence of this added vitamin.

These studies of the nutritional requirements and metabolic activities of mammalian cells are expected to provide a better understanding of the mechanisms responsible for cell growth, virus propagation, antibody production, and many other complex problems of infectious diseases.

Schistosomiasis in Middle East

A field survey sponsored by the World Health Organization points to needs and accomplishments in the Middle East schistosomiasis programs. The incidence of the disease may increase if snail intermediate hosts invade new irrigation projects.

Dr. Willard H. Wright, Chief of NIAID's Laboratory of Tropical Diseases, recently was assigned for a 2-month period to the World Health Organization to survey the status of research and control programs on schistosomiasis in Egypt, Sudan, Iraq, and Iran. This area has long been noted as a highly endemic center for schistosomiasis, and the disease here ranks well in the forefront as a public health problem.

When compared to past years, the research and control programs in Egypt seemed to have lost some momentum. There has been a decreasing amount of molluscacidal chemicals available, so that snail control now is attempted only within 500 meters of foci in which infected snails have been found. Snails and schistosome cercariae are rapidly washed out of infested areas into the control areas, so this method is of little permanent value in limiting the spread of the disease. Furthermore, in Egypt the number of treatment centers has been reduced. A current shortage of tartar emetic has resulted in decreased emphasis on the treatment of patients.

In the NIAID demonstration area near Cairo, however, snail eradication is being continued successfully, employing sodium pentachlorophenate as a molluscacide.

The main endemic area of schistosomiasis in the Sudan is in the Gezira district surrounding the city of Wad Medani. For snail control, copper sulfate has been employed extensively and a mechanical barrier consisting of a wire screen with a small mesh has been set up in the main irrigation canal in order to screen out snails from the Nile. In addition to this barrier, chemical barriers have been placed at the entrance of each secondary canal, and it is claimed that a concentration of 0.125 part per million of copper sulfate is constantly maintained in the canal system. While there is a lack of critical evaluation of these methods, there is reason to believe that they have been reasonably successful in limiting the numbers of molluscan intermediate hosts in the Gezira area.

In Iraq the schistosomiasis control program consists in the employment of molluscacides and the treatment of infected individuals. WHO also has a control project in Iraq mainly concerned with the development of new methods for checking the spread of the disease.

The main problem of schistosomiasis in the Middle East today concerns the prevention of the reinfestation of canals and drains after the successful application of new molluscacides, such as sodium pentachlorophenate, which is effective in destroying all snails and snail eggs. Reinfestation of the canals in Egypt and the Sudan comes from the Nile. In Iraq it is believed that snails from the Tigris and Euphrates reinfest the canals. The development of new irrigation projects in many countries in this part of the world offers an added problem in the control of schistosomiasis. Projects for immediate development include the reclamation of 1,750,000 acres in the Sudan, 2,054,000 in Egypt, 257,000 in Iraq, and 50,000 in Iran.

Unless methods are found for preventing the encroachment of molluscan intermediate hosts into the new irrigation systems, the disease will become even a greater public-health problem than it is at the present time. WHO and countries involved are undertaking research on methods of preventing reinfestation of irrigation canals following the use of molluscacides.

Background Statement on Allergy-Immunology Studies at the National Institutes of Health

The study of the allergic diseases and immunologic phenomena fundamental to them and to the infectious diseases has been long neglected. Only recently has this area of medicine begun to share in the acceleration of medical advance characteristic of the modern era.

The United States Public Health Service, recognizing the need for research in this neglected area and its close relationship to the study of infectious diseases, expanded the research program of the National Microbiological Institute to in-

clude allergy. This Institute, one of the National Institutes of Health, was then redesignated the National Institute of Allergy and Infectious Diseases.

Authorization by the Surgeon General became effective December 29, 1955. A separate national advisory council was established for the Institute, as provided in Public Law 410, to make recommendations to the Surgeon General regarding grant and training activities in the field of allergy and infectious diseases. In 1957, Congress authorized a graduate training grants program designed to help overcome some of the critical manpower deficiencies in allergy immunology.

Recent progress in both studies conducted at Bethesda and those supported by Institute grants in universities and medical centers throughout the United States is outlined briefly in the opening statement by the Director, National Institute of Allergy and Infectious Diseases (NIAID), for inclusion in the record of the House Appropriations Committee hearings, 1959 NIAID budget estimate. The report which follows is supplementary to that statement.

THE PROBLEM OF THE ALLERGIC DISEASES

About 17 million people in the United States—or about 1 in 10—have some form of allergy. Included in this estimate are sufferers from one or more conditions such as hay fever, asthma, contact dermatitis, perennial rhinitis, eczema, allergic headache, abnormal reactions to drugs, and other allergies. Many allergy sufferers periodically lose time from work, reducing our industrial productivity, while some become permanently disabled. For example, crippling lung disorder due to asthma is many times more common than crippling from polio. Initial research on the allergies has indicated that these disorders are even more widespread and alarming than had been realized. Apparently, allergy may be involved in many manifestations of major diseases, such as forms of heart disease and certain stomach disorders and nervous ailments. For example, rheumatoid arthritis and rheumatic heart disease appear to have allergic aspects.

Allergy has received scant attention in the past from scientific investigators. Research knowledge has offered very little beyond description of the types and symptoms of the allergic conditions. Knowledge is lacking about the underlying mechanisms of the allergic response or of immunochemistry in general.

Industrial progress has intensified the problem of allergy. There is widespread evidence of sensitization to industrial chemical agents, including the constantly increasing number of new compounds that are used in our modern technology. It seems logical to assume that allergic sensitivity plays a role in the response of urban populations to atmospheric industrial wastes. The antibiotics and new drugs so essential to modern medical practice have introduced additional problems of drug hypersensitivity.

With a broader understanding of allergy, it has become apparent that the list of possible substances to which a person can be sensitive (allergens) is long indeed, including many common allergens such as certain foods, airborne dusts, cosmetics, and drugs. Reactions may range from an almost unnoticeable minor irritation to severe and even fatal shock. Any of the tissues of the body are capable of taking part in the allergic reaction.

The reaction of the body to a foreign particle, such as a bit of pollen, is in some respect similar to its defense against a dangerous invading germ. Many of the same principles of immunization that apply in the infectious diseases have been found useful also in allergy, and the study of immunology is fundamental to progress in both areas.

FINANCIAL SUPPORT FOR ALLERGY-IMMUNOLOGY RESEARCH

A request for a budget increase of $100,000 for work in allergy and immunology by the NIAID laboratories for fiscal year 1959 is included in the opening statement to the House Appropriations Committee by the Director, NIAID. In fiscal year 1956, the allocation for allergy-immunology research by Institute laboratories amounted to $61,293. In fiscal year 1957, the total was $135,441, and in fiscal year 1958, $143,000. If the increase is granted by Congress, the total for fiscal year 1959 will be $243,000.

Under the research-grants program of the Institute, 1 grant of $4,293 for allergy research and 8 grants for $73,965 in immunology were awarded to non-Federal investigators at the inception of the new undertaking during fiscal year 1956. In fiscal year 1957, medical centers and universities received 71 grants totaling $1,091,324 in allergy and 57 grants for $669,522 in immunology. There were 92 allergy grants for $1,339,584 and 65 immunology grants for $776,143 in fiscal year 1958, bringing the total to 157 grants for $2,115,727. It is anticipated that about the same grant support will be made in this field in fiscal year 1959.

LABORATORY OF IMMUNOLOGY

Early in 1957 the Institute's existing work in immunology was integrated with the new allergy program, and the Laboratory of Immunology was established. Since fundamental understanding of the mechanisms of the allergic reaction must precede broad advances in preventing allergic diseases, the initial work of the Laboratory is concerned primarily with this basic problem.

One of the Laboratory's major projects has been the development of a new diagnostic test. This test, employing a colloidal clay known as bentonite, is the result of extensive experimentation by a Laboratory of Immunology scientist, John Bozicevich. The remarkable simplicity of the method suggests it may prove an extremely useful diagnostic aid. Behind this simplicity of performance, however, lies ingenuity and meticulous care in preparing each of the specific reagents used in detecting one disease or another.

The bentonite clay provides a suspension of very minute particles in a solution. These particles will become involved in a reaction between a prepared, specific gamma globulin solution and blood from an infected person. The reaction becomes easily discernible in a few minutes rather than in hours or days as in other tests. When the Bozicevich test is positive, an observer sees the clumping together (in a blue-stained blood droplet) of the bentonite clay particles.

First used by Bozicevich to demonstrate trichinosis infection, the method has been extended to diagnosis of other diseases as well. Most recently, Arthritis Institute ivestigators, who assisted in applying the test to patients with rheumatoid arthritis, described it as equal in accuracy to the best current tests for this disease and as having the added practical advantage of producing results in a few minutes rather than days.

Several other studies have been initiated by the Laboratory. One of these suggests the possibility of an allergic state in man following repeated blood transfusion. Skin grafts, anaphylactic shock, paralysis as a result of allergy, mechanism of immunization in tuberculosis, and the effect of aging on the formation of antibodies will be investigated in other projects now underway.

To provide broader training for its scientists and to meet the present space shortage in Bethesda, the Laboratory of Immunology has placed two of its newly acquired investigators on temporary assignments with other institutions. At the Rockefeller Institute in New York, an investigator is employing tissue-culture methods to study allergic manifestations associated with certain infections. And at New York University a project has been set up to investigate experimental allergic encephalomyelitis. This is believed to be an immunological disease involving the interaction of antibrain antibodies with living, intact brain tissue. It is characterized clinically by paralysis and pathologically by vascular and perivascular inflammation of the brain and spinal cord. Several experiments are in progress.

CLINICAL PLANS

Typically, the NIAID Laboratory of Clinical Investigation works cooperatively with the Institute's basic laboratories. This close association is designed to stimulate more rapid application to clinical medicine of knowledge acquired through test-tube and animal research. While the Laboratory of Clinical Investigation has conducted patient studies of particular interest to immunologists (for example, research on hypogammaglobulinemia—a deficiency in the body's ability to make antibodies against infections), the study of allergic diseases is a relatively recent enterprise of NIAID. The first steps have now been taken, however, to establish a clinical research program in allergy as an adjunct to basic studies by the Laboratory of Immunology.

RESEARCH-GRANTS PROGRAM

During the past 3 fiscal years, the level of NIAID grant support for allergy-immunology research in universities and medical centers has increased markedly—from about $78,000 in 1956 to over $2 million in 1957, as the new program has gained momentum.

As the initial venture in this broad-scale attack upon allergic disease problems is further advanced, we may expect significant developments of a practical nature. The great majority of studies under the grants program have been activated during the past year or two.

Improved immunizing agents and more efficient methods of administering them have been developed as a result of grant studies. The recognition and initial

characterization of different sensitizing antibodies in allergic individuals, as reported by one grantee, represent an important contribution to the basic understanding of the allergic reaction.

NIAID now supports a number of studies of industrial dermatitis. The findings should be of great value in industrial medicine, since allergic contact dermatitis is a common disease of the shop and the factory. Housewives and office workers, too, are familiar with the problem.

Brief mention of these investigations was made in the opening statement by the NIAID Director to the House Appropriations Committee (fiscal year 1959). In more detail, they provide an excellent example of the typical scientific approach to a problem of this nature.

Three NIAID grant-supported projects in allergic dermatitis are outlined below:

University of Pennsylvania.—The objective of this study is to delineate the biologic mechanism underlying the hypersensitive reaction to certain materials. Several hundred inmates of a Philadelphia institution are the experimental subjects. A series of graduated patch tests are expected to ascertain the end point or smallest concentration capable of provoking a dermatitis in sensitized persons. The study has many facets relating to exposure to materials in various emulsions; to use of non-cross-reacting materials simultaneously, independently, and in sequences, to see if one allergy predisposes to another; and to sensitization of the palms to discover what it is in the palm that resists ordinary sensitizations. The investigators hope to formulate a general theory of allergic contact dermatitis in man.

NYU-Bellevue Medical Center.—Investigators here are using radioactively labeled allergens to study such questions as the following: In what part of the skin structure does the allergen begin reacting—the horny layer, basal cells, nerves, blood vessels, blood or tissue cells, hair follicles, or sweat apparatus? How does sensitization spread to affect the rest of the body's skin surface? What is the site of response to a second exposure of the skin to the allergen? Studies include work with human volunteers. As far as is known, no other systematic research has been conducted on the mechanisms of allergic contact dermatitis using radioactive isotopes.

University of Cincinnati Medical College.—In this study, photographs in color, using special closeup techniques for stereobinocular observation and photomicrography, are being made at intervals to record the reaction of normal and abnormal skin of human subjects during exposure to four general groups of materials: (*a*) irritants—aromatic and solvents; (*b*) skin cleansers—soaps, detergents, alkalis; (*c*) sensitizers—nitrochlorobenzenes, aromatic amines, turpentines, nickel; (*d*) photosensitizers—petroleum fractions, essential oils. These materials are being applied singly and in combination under various conditions of humidity and temperature. Various skin areas will be tested for periods of varying duration. A critical evaluation of all factors might point to a way of preventing the situations in which "allergic accidents" occur, as a phase of preventive medicine and the safety program in industry and elsewhere.

Background Statement on Germ-Free Studies at the National Institutes of Health

Germ-free research and the implications of this work for biological science have been described in two of the series of NIH progress reports prepared at the request of Congress to be kept informed of program developments and research progress of the National Institutes of Health and its grantees. These reports (RPR–22, September 1954, and RPR–74 January 1957) are available from the NIH through the Publications and Reports Section, Scientific Reports Branch.

The present summation is supplementary to these documents and to the brief information on germ-free animal studies provided in the opening statement by the Director, National Institute of Allergy and Infectious Diseases, for inclusion in the record of the House Appropriations Committee hearings in connection with the 1959 estimate for salaries, expenses, and grants of the NIAID.

The germ-free animal provides an arena in which the actions and interactions of one or more specific microorganisms can be studied free of confusion, heterogeneous mixtures of bacteria, fungi, protozoa, or parasitic worms which are present in the normal animal.

Rearing animals, particularly mammals, in the germ-free state, is, however, one of the most demanding and complex methods of biologic investigation. The animal must be delivered by sterile caesarean section, introduced without bacterial contamination into a rearing chamber, and provided with warmth, light, germ-free air, sterile food and water. Frequent tests must be conducted to demonstrate that the animals have remained sterile.

The Laboratory of Bacteriology of the University of Notre Dame (LUBUND) pioneered in germ-free research, and showed that, in spite of the complexities, skilled teams of scientists and engineers could maintain equipment and raise and utilize germ-free animals. The potential of this new research tool was readily apparent. A backlog of hundreds of research proposals awaited facilities for producing sufficient numbers of the germ-free animals.

In the past, use of germ-free animals in medical and biological research has been largely limited to institutions able to set up their own facilities for breeding and rearing such animals. One step toward extending use of such animals was taken last year when a germ-free truck, or station wagon, was developed and successfully used for transportation of germ-free animals. First such shipment was made from Notre Dame University to NIH in May 1957.

Now another advance has been made on this problem. A shipment of germ-free animals received at NIH in February 1958 was handled entirely by Railway Express and was unattended for approximately 18 hours. Filtered air was supplied these animals en route by means of a small, battery-operated blower. The animals were housed in a plastic container securely mounted within a plywood shipping crate.

This development by a Notre Dame scientist extends the concept of using germ-free animals to many smaller research institutions and to agencies anywhere in the United States. The procedure has advanced the NIH germ-free research program by a year or more ahead of the original estimate based on raising all our own germ-free animals in NIH facilities at Bethesda.

The germ-free unit employed at NIH in raising these animals consists essentially of a stainless steel tank with a built-in autoclave which has one door on the outside and one which can be opened from inside the tank. This permits steam sterilization of materials prior to their introduction into the tank. Sterilization of heat labile substances is effected by passage through germicides. Long sleeved, durable rubber gloves are sealed about openings on either side and permit handling of the animals. A sealed window allows vision.

Research is underway in a number of places, including NIH, to simplify equipment. Lower gage stainless steel, plywood, and plastics are among the materials being used experimentally in an effort to reduce the cost of equipment without sacrificing efficiency.

In fiscal year 1956 there were no grants by NIAID for germ-free research. In fiscal year 1957, 2 grants were active in the amount of $22,039, and in fiscal year 1958, 3 for $127,973. The substantial increase in grant total of 1958 over 1957 reflects support of an accelerated program of germ-free research at the University of Notre Dame where some $250,000 worth of permanent laboratory equipment is available for this work.

The demand for germ-free animals has far exceeded the production capacity of Notre Dame's LOBUND Institute, however, and efforts to increase the Nation's potential for this type of research resulted in establishment of a germ-free facility at Walter Reed Army Medical Center (second in the United States) and, subsequently, facilities at the National Institutes of Health.

As has been reported to the House Appropriations Committee, nine additional stainless-steel chambers have been installed at NIH since the initial germ-free animals were successfully produced by NIAID scientists in October 1956. Since that time increasing numbers of experiments have been conducted by NIAID and by other Institutes. The statements made by several Institutes to the Appropriations Committee testify to progress in germ-free research at Bethesda.

The Institute used $11,090 for germ-free research in fiscal year 1956, principally for training personnel in the specialized techniques at LOBUND. With the establishment of the Section on Germ-Free Animal Studies at NIAID, funds increased in fiscal year 1957 to $57,857, and the estimate for fiscal year 1958 to $90,000. It is expected that, before the end of fiscal year 1958, the Section will have moved into an area especially equipped for the rearing, maintenance, and research use of germ-free animals. The Section will have, for such purposes, 8 of the 16 germ-free units which will be available at NIH.

Germ-free research by NIAID already has pointed to some of the factors involved in the pathogenesis of amoebiasis. Recent studies by the Institute have

suggested that conventional, contaminated animals have an immunological experience that enables them to ward off infections of certain types, whereas in the germ-free animals this mechanism for resistance seems to be much less developed. For example, several different species of worm parasites have developed to egg-producing adults in germ-free guinea pigs, whereas they could not establish themselves in the conventional animals. Such a finding suggests the need for comparative studies on the precise nature of natural resistance. Questions that may be answered include: When does natural immunity become effective? What triggers it? What in the skin, the lungs, and the intestinal lining determines that a parasite larva or an adult is to be held up, destroyed, and then walled off in the actively immunized or naturally immune animal?

A preliminary plan for the most effective use of the NIAID germ-free facility over the next several years has been prepared. This envisions independent and cooperative studies of immunological and nutritional problems and of single or symbiotic infections under controlled conditions heretofore impossible.

The NIAID Laboratory of Tropical Diseases, of which the germ-free study group is a section, is particularly concerned with parasitology. It is expected that germ-free animals will be used as a tool or testing device whereby one may evaluate the effects that bacteria and other microorganisms have upon the parasite, the host, and various aspects of host-parasite relations shown to be of importance in a particular disease. The natural complement to this is, of course, the study of the disease from the standpoint of the parasite per se. Through such means, one may look forward to a better understanding of the processes that influence the disease as it occurs naturally (i. e., in the conventional contaminated host). However, it is also likely that leads to fundamental principles of potentially broad application to infection and disease, in general, may well become apparent from ad hoc experiments designed to establish a particular point about a particular parasite. Thus, the germ-free animal research effort will also be conducted, at the outset and at least during the next few years, with the assumption that there will be some experimentation of a purely exploratory or prospecting type.

Progress is dependent upon obtaining sufficient germ-free rearing and holding facilities (both the Reyniers type and any subsequently developed at NIH) to allow experimentation with several species of germ-free animals, i. e., guinea pigs, rats, and mice; and upon augmenting the Section's staff by the addition of professionals of varied training (e. g., histologist, pathologist, biochemist) in order to broaden the areas of study that can be pursued in the approach to a problem.

During the next several years the NIAID scientists engaged in germ-free research envision studies to:

1. Continue, through the use of extracts and components of intestinal contents of conventional animals and, the use of monocontaminated animals, attempts to ascertain the factors that allow Endamoeba histolytica (the agent of amebic dysentery) to become established in the bacteria-inhabited and not the germ-free intestine. These studies could provide significant information not only about the pathogenesis of amebic dysentery, but also about bacteria-parasite relations in general.

2. Continue and expand studies on the development and pathogenesis of, and immunologic responses to, worm-parasite infections in both normal and abnormal germ-free hosts.

3. Establish a parasite-host system (for example, the mouse and Nematospiroides dubius) providing consistent infection results and pathology in a germ-free animal that can be reared on a synthetic or semisynthetic diet. With such a system, certain dietary deficiencies or excesses could be evaluated with regard to their effects on the disease picture.

4. Compare the fate of some of our more effective chemotherapeutic compounds in germ-free and conventional animals, to determine the possible effect of the intestinal flora on the degradation and efficacy of the drug. Also, in systems where the same parasite can be reared in germ-free and conventional animals of the same species, compare the effectiveness of a given drug against the parasite. This can also provide clues as to whether a drug or a bacterial metabolite of it is the effective agent.

5. Study the physiology and biochemistry of various parasites in the germ-free animal to determine their fundamental metabolic activity and the possible detrimental effect of metabolic end products on the host animal in the absence of bacterial flora.

These are some of the immediate and specific research ventures proposed or under study by scientists of the Laboratory of Tropical Diseases, NIAID. The Institute's germ-free facility will also be made available to investigators of other Institutes of the NIH. It is expected that the National Institute of Arthritis and Metabolic Diseases will transfer their two germ-free units (in which they are conducting studies on nutrition) to NIAID's facility. In addition to their own studies, NIAID and NIAMD are currently engaged in a collaborative study on the nutrition of germ-free animals. A cooperative study between NIAID and the National Institute of Dental Research has been under way, and a brief report on the preliminary results of this work, dealing with the behavior of oral bacterial agents in germ-free and conventional guinea pigs, has been submitted by NIDR for presentation to a dental professional society.

As previous reports on germ-free research at NIH and grantee institutions have indicated, the scope of these investigations is not limited to any category of disease. Most findings will be pertinent throughout the fields of biological and medical science. Investigations of the causes of shock, factors in longevity, and the role of bacteria in radiation fatalities are examples of studies which will be facilitated by the new germ-free tool now becoming increasingly available to medical scientists.

Funds for Continuation Grants

Senator Hill. Doctor, what funds are required for continuation grants for fiscal 1959?

Dr. Andrews. We think that there will be something over $9 million. Of this amount, $8,879,646 are for continuation grants, for which we feel moral commitments, plus some $450,000 additional for those grants for which at present there is no moral commitment; that is a total of approximately $9,300,000.

Senator Hill. That would be new projects approved but for which you did not have sufficient funds for this year?

Dr. Andrews. Well, we have applications recommended for payment almost to the amount of 2 million; actually, $1.96 million, which cannot be paid this year because we do not have the money.

NEW PROJECTS ANTICIPATED

Senator Hill. How about the new projects which you anticipate will be approved, based on your past experience?

Dr. Andrews. According to our past experience, there should be from 375 to 400.

Senator Hill. How much money would be needed to activate these new projects?

Dr. Andrews. About $4,800,000 would probably do it.

Senator Hill. And altogether, that amount would be about $16 million?

Dr. Andrews. That is right, Senator.

Senator Hill. Now, what is the situation with respect to training grants?

Dr. Andrews. As I mentioned earlier, we have not been able to make any training grants other than those which were first approved and which amounted to approximately $580,000 this last year. This, of course, is the same amount shown in the President's budget for 1959, and in the House allowance. This is not enough to take care of all of our areas of training grant and research fellowship responsibility. I would think that we would need at least $1½ million to support all of our areas of need, again with special emphasis, as I indicated earlier, in the field of virology.

Senator HILL. You made that pretty clear in your statement, but you need a minimum of $1,500,000?

Dr. ANDREWS. This would just about take care of what business we can foresee; yes, sir.

CYSTIC FIBROSIS

Senator HILL. I note that the House gave you $500,000 for cystic fibrosis and from the statement it appears that this disease is more important than diabetes, poliomyelitis or rheumatic fever, as a cause of death among children in the country. Do you concur with that?

Dr. ANDREWS. It depends on what measure of importance one puts upon these things, of course.

The figure of 7,000 commonly quoted is for the number of children born with this disease, and most all of them die young.

Senator HILL. You mean 7,000 a year?

Dr. ANDREWS. Yes.

Senator HILL. Annual deaths?

Dr. ANDREWS. This puts it into higher magnitudes of figures for the early years of life that these other diseases that you mentioned. I must emphasize, however, that much more study needs to be done before we are really sure of how many people die with this. Many of the deaths occur within a few days of birth; unless the child is in a hospital where autopsies are being done routinely, it is relatively improbable that he would be reported as dying from cystic fibrosis.

On the other hand, the children hospitalized are not representative of children in general, so we will not know about death rates until we study this problem more, which we propose to do this next year.

Senator HILL. But certainly, $500,000 can be well invested and put into good use in this field, is that not correct?

Dr. ANDREWS. Yes, indeed, but may I call the Senator's attention to the fact that only a part of the $500,000 given by the House is to be used for this puropse.

LETTER FROM KENNETH WILLIAMSON

Senator HILL. I have received a letter from Mr. Kenneth Williamson, associate director, American Hospital Association, urging greater appropriations for both the allergy and infectious diseases program and the communicable disease program of the Public Health Service for use in connection with the problem of staphylococcus infections in our hospitals, about which we have just heard testimony. Mr. Williamson's letter will be included at this point in the record.

(The letter referred to follows:)

AMERICAN HOSPITAL ASSOCIATION,
Washington, D. C., April 29, 1958.

Hon. LISTER HILL,
Subcommittee on Labor, and Health, Education and Welfare, Senate Appropriations Committee, Senate Office Building, Washington, D. C.

DEAR SENATOR HILL: The American Hospital Association wishes to bring to the attention of your subcommittee the problem of staphylococcus infections in hospitals and urge increasing the proposed appropriations beyond those presently contemplated to the National Institute of Allergy and Infectious Diseases and to the Communicable Disease Center.

Representatives of the association's committee on infections within hospitals, meeting with the Surgeon General of the Public Health Service and members of his staff on April 23, agreed upon the seriousness of the problem and the immediate need for greatly increased research and control activity. It was the

consensus of the meeting that adequate funds are not now available within the proposed PHS appropriations for 1959, and that additional funds are needed to undertake this work which should include at least $1 million of additional funds for the Institute, earmarked for staphylococcus research, as well as increased appropriations for the Communicable Disease Center in the amount of $500,000 for the conduct of field studies, control activities and to provide additional support to State laboratories.

The problem of infections acquired by patients in hospitals has grown rapidly and seriously, in spite of efforts at control. The infections produced by staphylococcus are a particular hazard. Many hospitals now have a serious problem with hospital-acquired staphylococcus infections, and all hospitals have a potential problem. Information is inadequate as to the incidence of hospital-acquired staphylococcus infections, but there is evidence that the number of such infections is increasing.

This organism produces impetigo and more severe infections in children, puerperal mastitis in recently delivered women, burn and post-operative wound infections, and pneumonia in debilitated patients. The staphylococcus may also be responsible for osteomyelitis, meningitis, septicemias, empyemas, boils and abscesses, otitis media, paronychiae. A striking example of the serious nature of this disease is the epidemic which occurred in the Jefferson Davis Hospital of Houston, Tex., which resulted in the death of 16 babies in a matter of a few months.

There appear to be innumerable strains of staphylococcus capable of producing infections. Many of these staphylococci are susceptible to antibiotics. Some are not. Infections with antibiotic-resistant staphylococci constitute the main difficulty. Antibiotic-resistant strains are found most frequently in hospitals, while strains from the community at large are predominantly sensitive to antibiotics. The strains carried by patients on admission to hospitals are less frequently resistant than hospital-acquired strains. Patients who acquire these infections in the hospital are potential spreaders of resistant strains to the community after discharge. One of the major factors in the current situation is the widespread use of antibiotics which eliminates susceptible strains of staphylococcus and leaves uncontrolled the resistant strains. (It is not known whether resistant strains of this organism actually acquire resistance after exposure to the antibiotics, or are resistant to begin with and are simply unmasked by the suppression of susceptible strains—although the latter is thought to be the case. From a practical point of view it does not matter which theory is correct.)

The incidence of this disease is not known and much too little is known about the organism itself, the nature of resistance of people to the organism, and its mode of transmission. The effects of environmental conditions are generally unassessed. A great deal of study will be required to provide answers for effective prevention and control of this most serious problem. The Public Health Service is prepared to make the quickest start in providing some answers if it is given additional funds for this purpose.

Several of the national health organizations have committees actively at work on the problem. However, they are not in a position to undertake the basic research which is essential before really adequate measures of control may be developed.

We understand that your committee is to have public hearings in May on the Public Health Service appropriations. We would appreciate the opportunity of having a representative of the association appear before the committee at that time to discuss the whole problem outlined in this letter. We would also appreciate your placing this letter in the record of your committee hearings.

Sincerely yours,

KENNETH WILLIAMSON,
Associate Director.

CONCLUSION

Senator HILL. Well, Doctor, we want to thank you, sir, for your very splendid and informative statement. We appreciate it very, very much and unless there is something that someone would like to add we will stand in recess then until 10 a. m., Friday morning.

(Whereupon, at 12:20 p. m., Wednesday, April 23, 1958, the committee recessed, to reconvene at 10 a. m., Friday, April 25, 1958.)

LABOR—HEALTH, EDUCATION, AND WELFARE APPROPRIATIONS, 1959

FRIDAY, APRIL 25, 1958

UNITED STATES SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D. C.

The subcommittee met at 10 a. m., pursuant to recess, in room F–82, the Capitol, Senator Lister Hill (chairman of the subcommittee) presiding.

Present: Senators Hill, Pastore, Smith, and Dworshak.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

PUBLIC HEALTH SERVICE

NEUROLOGY AND BLINDNESS ACTIVITIES

STATEMENT OF DR. PEARCE BAILEY, DIRECTOR, NATIONAL INSTITUTE OF NEUROLOGICAL DISEASES AND BLINDNESS; ACCOMPANIED BY DR. JAMES A. SHANNON, DIRECTOR, NATIONAL INSTITUTES OF HEALTH; DR. C. J. VAN SLYKE, ASSOCIATE DIRECTOR, NATIONAL INSTITUTES OF HEALTH; DR. JOSEPH E. SMADEL, ASSOCIATE DIRECTOR, NATIONAL INSTITUTES OF HEALTH; AND JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

"Neurology and Blindness Activities

"[Neurology and blindness activities:] For expenses necessary to carry out the purposes of the Act relating to neurology and blindness, [$21,387,000] *$20,727,000.*"

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate	$21,387,000	$20,727,000	$21,977,000
Deductions:			
Comparative transfer to "General research and services, National Institutes of Health, Public Health Service"	−549,000	0	0
Unobligated balance, estimated savings	−43,000	0	0
Total obligations	20,795,000	20,727,000	21,977,000

Obligations by activities

Description	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Grants:						
(a) Research projects		$10,750,000		$10,750,000		$11,920,000
(b) Research fellowships		451,000		451,000		451,000
(c) Training		4,500,000		4,500,000		4,500,000
2. Direct operations:						
(a) Research	260	4,602,500	260	4,552,500	264	4,602,500
(b) Review and approval of grants	23	357,000	23	355,000	26	385,000
(c) Training activities	7	46,500	3	30,500	3	30,500
(d) Administration	10	88,000	10	88,000	10	88,000
Total obligations	300	20,795,000	296	20,727,000	303	21,977,000

Obligations by objects

Object classification	1958 appropriation	1959 budget estimate	1959 House allowance
Total number of permanent positions	300	296	303
Full-time equivalent of all other positions	25	25	26
Average number of all employees	288	[1] 285	[1] 292
Number of employees at end of year	330	[1] 323	[1] 330
01 Personal services	$1,768,338	$1,759,838	$1,799,838
02 Travel	106,500	104,000	104,500
03 Transportation of things	26,700	24,200	25,200
04 Communication services	26,200	25,900	26,200
05 Rents and utility services	6,500	6,500	6,500
06 Printing and reproduction	17,000	17,000	17,000
07 Other contractual services	121,600	120,600	120,600
Research contracts	35,000	35,000	35,000
Reimbursements to "National Institutes of Health management fund, Public Health Service"	2,312,600	2,320,600	2,332,600
08 Supplies and materials	360,600	326,800	337,800
09 Equipment	258,000	227,500	240,000
11 Grants, subsidies, and contributions	15,676,000	15,676,000	16,846,000
Contribution to retirement fund	81,900	85,200	87,700
15 Taxes and assessments	7,400	7,200	7,400
Subtotal	20,804,338	20,736,338	21,986,338
Deduct quarters and subsistence charges	9,338	9,338	9,338
Total obligations	20,795,000	20,727,000	21,977,000

[1] Reduction in employment to absorb costs of scientists-engineer pay adjustment is not reflected in the 1959 President's Budget, but is shown here since it is a mandatory item.

Summary of changes

	Positions	Amount
1958 actual appropriation	300	$21,387,000
Transfers: Comparative transfer to "General research and services, NIH"		−549,000
Adjusted 1958 appropriation	300	20,838,000
Deduct nonrecurring costs: Estimated savings		−43,000
1959 base	300	20,795,000
1959 appropriation request	296	20,727,000
Net change requested	−4	−68,000

	1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount
Decreases:				
Reduction in new research projects to absorb indirect costs		$745,900		
Reduction in miscellaneous objects to absorb costs of annualization of retirement contributions		4,300		$4,300
Reduction in the in-service training program of the Institute	4	16,000	4	16,000
Reduction of miscellaneous objects to absorb costs of annualization of 1958 program base positions		60,000		60,000
Reduction in employment to absorb costs of scientists' and engineers' pay adjustment		[1] 11,000		[1] 11,000
Subtotal, decreases	4	837,200	4	91,300
Increases:				
For mandatory items:				
Retirement contributions: Annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)		4,300		4,300
Pay adjustment costs for scientists and engineers		[1] 11,000		[1] 11,000
Subtotal, mandatory increases		15,300		15,300
For program items:				
Amount necessary to support full indirect costs		745,900		
Research projects for studies relating to the perinatal period				200,000
Research projects for studies relating to multiple sclerosis, epilepsy, muscular dystrophy, and other neurological and sensory diseases				970,000
Cost of increased review and approval services			3	18,000
Direct research in the fields of sight and hearing			4	50,000
Net change in reimbursement to National Institutes of Health management fund		8,000		20,000
Subtotal, program increases	0	753,900	7	1,258,000
Total change requested	−4	−68,000	+3	+1,182,000

[1] Scientist-engineer pay adjustment is not reflected in the 1959 President's budget, but is included here since it is a mandatory item.

Effect of House Action

Activity No. 1 (a)—Grants for research projects

The increase of $1,170,000 will be applied to research projects for studies relating to the perinatal period and such diseases as multiple sclerosis, amyotrophic lateral sclerosis, epilepsy, cerebral palsy, muscular dystrophy, and Parkinson's disease, together with the studies fundamental to all neurological and sensory diseases.

Activity No. 2 (a)—Research

The full amount requested of $4,552,500 and 260 positions was allowed by the House, plus an additional $50,000 and 4 positions which will be utilized to expand research in the fields of sight and hearing. This amount of $4,602,500 is the same as the 1958 appropriation.

Activity No. 2 (b)—Review and approval of grants

The full amount requested of $355,000 and 23 positions was allowed by the House, plus an additional $30,000 and 3 positions which will be utilized to employ additional professional and clerical staff required for the processing, analyzing, and management of the grants and awards. This amount of $385,000 is an increase of $28,000 over the 1958 appropriation.

PREPARED STATEMENT

Senator HILL. The committee will kindly come to order.

Doctor, we are very happy to have you here with us this morning. We will be glad, sir, to have you proceed in your own way.

Dr. BAILEY. Thank you, Mr. Chairman and members of the committee.

Most of the program of our Institute is contained in my prepared statement and the research highlights, which you have before you, supplemented by a statement of very recent advances which I am submitting for the record.

Senator HILL. That will be put in the record at this point.

(The material referred to follows:)

STATEMENT BY THE DIRECTOR, NATIONAL INSTITUTE OF NEUROLOGICAL DISEASES AND BLINDNESS

Mr. Chairman and members of the committee, the budget proposal for this appropriation in 1959 is $20,727,000.

Important advances have been made during the past year in the program of research and training in the field of neurological and sensory disorders. Healthy growth has been demonstrated in the extramural program, not only in research grants but also in the training of research scientists and teachers at the postgraduate level. The trend, noted last year, toward the collaborative type of field investigations has continued to develop. The intramural program has been expanded and strengthened in both clinical and basic research on the central nervous system and its aberrations.

Among the important developments in research during the past year are the following: Regeneration and restoration of destroyed nervous tissue has been demonstrated in animals; methods of studying the ultrafine structure of the central nervous system have been developed and utilized to provide new information; early diagnosis in blinding eye diseases has been developed further; certain inflammations of the eye have been found to be precursors of systemic disorders; diffuse damage of brain cells and behavioral evidence of brain damage resulting from neo-natal asphyxia has been demonstrated with animals.

The cerebral palsy-mental retardation collaborative study of perinatal morbidity is well underway; electrophysiological and biochemical advances have been made in the understanding and control of epileptic seizures; the technique of hypothermia has provided improved surgical procedures for the repair of aneurysms of blood vessels in the brain with a marked reduction in operative mortality; surgical relief from involuntary movements in cerebral palsy and Parkinsonism has been improved; biochemical studies of myelin formation and degradation are providing new knowledge relative to multiple sclerosis; new types of muscle disorders have been identified and described; the study of the process of aging of the central nervous system accelerated; and investigations of possible organic factors in disorders of speech and hearing have been initiated.

The major increase in the extramural research grants program has occurred in the basic neurological sciences and in the collaborative investigations of perinatal factors related to neurological and sensory deficits of infancy and childhood. Significant increases occurred also in the fields of hearing, the blinding diseases, cerebral vascular disorders, multiple sclerosis and muscular dystrophy.

Graduate training grants were increased in the fields of neurology, ophthalmology, and otolaryngology, and new programs in the basic neurological sciences were initiated. Traineeships and fellowships were also increased.

The Institute's plans for fiscal year 1959 are to continue to consolidate and implement the programs in research projects, both basic and clinical, and the programs in collaborative and cooperative field investigations, within the level of the 1959 budget allowances. It is intended as far as possible to maintain the current balance of effort between project research and field investigations. In the field investigations the Institute continues to function as a central laboratory and to provide leadership, counsel and guidance, specifically in the areas of biometry and epidemiology.

EFFECT OF HOUSE ACTION

The House provided an increase of $1,250,000 for this appropriation, of which $1,170,000 will be applied to research projects for studies relating to the perinatal period and such diseases as multiple sclerosis, amyotrophic lateral sclerosis, epilepsy, cerebral palsy, muscular dystrophy and Parkinson's diseases, together with the studies fundamental to all neurological and sensory diseases.

In addition, $50,000 will be devoted to expansion of direct research in the fields of sight and hearing and $30,000 for the processing, analyzing, and management of the grants and awards.

FORMAL STATEMENT

Mr. Chairman and members of the committee, the budget proposal that is before you is for an appropriation of $20,727,000 for the activities of the National Institute of Neurological Diseases and Blindness in fiscal year 1959.

At the time of my appearance before this committee last year, changes then developing in our program were outlined. It was stated that when our Institute was activated in fiscal year 1952, with only limited resources, the emphasis of the program was of necessity centered on providing support for specific research projects to be undertaken by the then available and trained investigators.

The Institute early recognized, however, that the advance of research is largely dependent upon the availability of capable investigators. Therefore, a training program in neurology, with emphasis on both clinical and basic sciences, was initiated in fiscal year 1955. During the past 2 years, this program has been expanded to train investigators in the techniques of chemistry and physics, and to orient them to the advantages of utilizing these techniques in developing knowledge of the structure and function of nervous tissue.

The growth of these far-reaching programs of research and training is shown by the progressive increase of funds made available through appropriations from $1,250,000 in 1952 to $20,795,000 in 1958. One sign of this growth is the rapid increase in membership of societies comprising scientists from the field of clinical neurology and also from the basic sciences of neuroanatomy, neuropathology, neurochemistry, and neurophysiology.

The progressive broadening of the horizons of neurological research has now reached the stage where it is possible and profitable to carry through research programs based upon concerted efforts of many individuals and institutions. This brings varied skills, techniques, and facilities to focus upon a single problem. This process is most clearly evident in the collaborative and cooperative field studies started last year and now well underway. It underlies much of the progress to be reported today.

These collaborative and cooperative studies represent a continuing trend. However, they in no way detract from the support of capable individual investigators or individual institutions concerned with a specific project or with research into a specific disease category. In short, the purpose of the collaborative approach is not to supplant the highly important work of the individual scientist but rather, to supplement his efforts in certain broad general areas.

The National Institute of Neurological Diseases and Blindness continues to benefit from the expert counsel provided by the scientific leaders of research activities throughout the world. Through the National Committee for Research in Neurological Disorders, professional societies and many voluntary health organizations provide information and guidance for the further development of the Institute's program in neurological and sensory disorders. Among the organizations represented on this committee are: The American Academy of Neurology, United Cerebral Palsy, National Multiple Sclerosis Society, National Epilepsy League, Muscular Dystrophy Associations of America, the National Society for Crippled Children and Adults, National Association for Retarded Children, Association for the Aid of Crippled Children, and the National Foundation for Infantile Paralysis.

GRANT PROGRAMS: RESEARCH AND TRAINING

The extramural research and training programs of this Institute have increased steadily with the increasing availability of trained scientists and teachers. The trend toward the team approach to complex medical problems has continued.

Research projects

During the fiscal year 1957, 640 grants totaling $9,296,122 were made. It is expected that 715 grants will be supported by awards totaling $10,750,000 during fiscal year 1958.

The recent increases in budget appropriations allowed a general expansion of the research effort on practically all aspects of neurological and sensory diseases as well as increased emphasis on fundamental studies. Although the amount of funds awarded for all facets of research increased, expansion in certain specific areas is worthy of mention.

During the past year, research on general metabolic and deficiency disorders increased by almost 70 percent. This expansion is believed to be due to the increased awareness of the value of the neurochemical and neuropharmacological approach to solving some of the most perplexing neurological problems. A like increase in research on injury to the nervous system from various causes other than trauma was registered.

Research into the disorders of vision, which in previous years had remained fairly stable, increased by over 60 percent. The major portion of this increase is attributable to renewed efforts to solve problems in retinopathy, uveitis, and keratitis.

By far the greatest expansion, however, was registered in disorders of hearing and balance. To be sure, very little research in proportion to the importance of this subject was being done in this area previous to 1957. Nevertheless, an increase to $600,000 in 1957, or over 300 percent, is significant under any term of reference. It indicates a general awakening and realization of the gains to be made by research in the entire hearing and speech field.

The collaborative and cooperative studies, particularly those of perinatal factors in cerebral palsy and mental retardation, and cerebral vascular disorders, have also expanded. These studies, with other investigations, included 41 grants totaling approximately $2,250,000 in 1957 and comparable grants totaling $3 million will be made in 1958.

Training

The training grant program is producing more well-trained research workers and teachers in the fields of neurological and sensory disorders. As a direct result, the basic science and clinical departments of the medical schools are being greatly strengthened and the research output is being increased.

Evidence of the growth of the training programs is contained in the number and amounts of awards made during recent fiscal years. There were 109 such grants amounting to $2.825,089 in 1957, and there will be approximately 130 grants totaling $3,500,000 in fiscal year 1958. Similarly 75 traineeships were awarded in the amount of $500,152 in 1957, and approximately 140 trainees will be supported by awards totaling $1 million in fiscal year 1958.

There were 285 fellowships amounting to $499,809 in 1957; and with the allocation of $451,000 it is estimated that 178 fellowships will be awarded in 1958. ($77,000, which was originally a part of this activity, will be used to support approximately 17 postsophomore and foreign fellowships under the National Institutes of Health appropriation.)

The training grant program in the field of hearing, which was begun in fiscal year 1957, now has 5 active grants amounting to $97,842.

Training in the basic sciences related to neurological and sensory disorders has been established with 3 grants in the amount of $91,360.

ADVANCES IN RESEARCH

The major advances achieved by the National Institute of Neurological Diseases and Blindness in neurological and sensory research during 1957 are reviewed in the annual Highlights of Research Progress in Neurological and Sensory Disorders. Copies of this document are being submitted for the record.

Some specific areas in which the more important research developments were attained include: Advances in diagnostic techniques in disorders of vision; significant biochemical findings about multiple sclerosis; basic research findings concerning the regeneration of nerve tissue. Still others are the development of new brain surgery techniques; advances in the treatment of cerebral palsy and Parkinson's disease; and the development and use of a technique which is providing significant information about the fine structure and function of the central nervous system.

Last year, another development in dagnostic techniques which contributes to the safety of neurosurgical procedures was reported. This was the method of local scanning for the detection of brain tumors, utilizing radioactive isotopes, which has been under investigation by Institute scientists during the last few years. This technique has been developed to a high degree of effectiveness and a standardized instrument is being prepared for general use.

While these and other advances in specific areas of neurological and sensory disorders are described in the Annual Highlights, the Institute has in operation certain comprehensive programs. Such programs are directed to a research attack by many kinds of scientists on specific diseases of complex origin. These programs and the disorders on which they concentrate merit consideration.

CEREBRAL PALSY

The most inclusive example of the same type of attack is the Institute's collaborative field investigation program, designed to uncover the causes of cerebral palsy, mental retardation, and other neurological and sensory disorders of infancy and childhood. Conceived in 1954, this program, in which the Institute serves as a central laboratory, and as a coordination center for statistics on cases, was initiated last year.

Since last year's report, 11 institutions have joined the program so that there are now 13 collaborating institutions, and over 150 physicians, scientists, and technologists all actively engaged in this program. During fiscal year 1958, several more will be added.

Cerebral palsy and other neurological and sensory defects arising in early life, because of the large numbers of individuals involved and the serious and prolonged disability which they produce are major medical and social problems. It has been shown that a large proportion of cerebral palsied individuals are damaged by reason of some event or circumstances occurring during pregnancy or in the period of labor and delivery. A certain additional number of children develop cerebral palsy as a result of injury or illness occuring in infancy. Knowledge of those circumstances and events during pregnancy or at birth which lead to injury and maldevelopment of the child will lead to better means of prevention and treatment of these disorders.

During fiscal year 1957 and the first half of fiscal year 1958, emphasis has been primarily with the organization of the collaborating institutions, the employment of the essential personnel and the preparation of a scientific protocol or detailed experimental design for the investigations. The program envisages the evaluation of the genetic, familial, and constitutional background of the parents, their social and economic status, their education and general level of intelligence, the emotional and physical health of the mother, and the complications of pregnancy, labor, and delivery. These observations will be correlated with the eventual health of the offspring, especially as it concerns cerebral palsy, mental retardation or other neurological and sensory disorders of early life.

There are two unique features of this collaborative study. The first lies in the nature of the collaboration. It requires an extremely close cooperation among the several institutions involved. Equally important, however, is the fact that this is a study involving many kinds of specialists. Within each institution, there are 10 to 15 different areas of scientific interest represented. The program is providing a powerful influence for cutting across scientific boundaries and for encouraging an exchange of techniques and information on many scientific levels.

The impact of this collaborative study already has extended far beyond the study itself through its effect on members of the obstetrical, pediatric, and neurological disciplines. They are becoming increasingly aware of the importance of this phase of medicine. This awareness is reflected in part by the greater number of applications for special traineeships in pediatric neurology. The collaborative study is thus providing a valuable stimulus toward one of the important objectives of this Institute—that of focusing attention on the importance of neurological disorders in infancy and childhood, a long neglected field.

MENTAL RETARDATION

The importance of the collaborative study for cerebral palsy is equalled by its importance in the field of mental retardation. Here again, it is an established fact that the majority of severely retarded individuals owe their retardation to factors existing at or prior to the time of birth. The nature of these factors is only dimly understood at the present time. The collaborative study is the first

step toward spotlighting those factors which are relevant and subjecting those under suspicion to intense investigation.

The problem of mental retardation, however, is one which extends far more widely throughout the field of medicine, for environmental prenatal factors are not the only ones which cause this disorder. It is known that a certain number of retarded individuals owe their retardation to defects of body growth or metabolism. The discovery of methods for the prevention and treatment of the disabilities which result from metabolic derangements as phenylketonuria, has altered our feeling of helplessness about these conditions. It encourages the intense investigation of the retarded child in the search for chemical irregularities which might be corrected. Advances in this area will parallel very closely advances in our knowledge of the chemical and anatomical structure of the nervous system.

The study of conditioning techniques in animals and of the effects of localized brain lesions on the learning process are throwing new light on the problems of intellectual impairment in humans. Animal studies have demonstrated that localized lesions of certain areas of the cortex produce specific defects such as those ordinarily looked for in the brain-damaged child. Lesions in the sensory area of the brain produce impairment of sensory perception. Conditioning and lesions in the occipital region are associated with the disturbances in visual learning.

Of particular interest, however, is the demonstration that certain previously unexplored central structures in the nervous system play an important regulatory function affecting the activity of the whole sense system. Lesions in these areas produce impairment of overall functioning, such as attention, alertness, and responsiveness to external stimuli. Previous pathological studies of the brains of retarded individuals have completely overlooked the possible significance of these important areas. The scarcity of careful anatomical study of large numbers of retarded individuals is almost unbelievable at this time. The Institute is supporting one large study of this sort, and is encouraging training programs for neuropathologists to undertake the painstaking analyses involved.

CEREBRAL PALSY IN MONKEYS

Closely related to the collaborative studies of cerebral palsy, mental retardation, and other neurological and sensory defects is the animal research program. Under this program, it was reported previously that the Institute had procured a free-ranging colony of monkeys on an offshore island in Puerto Rico. Progress with this colony has been most encouraging. There are 255 Macaca mulatta monkeys now living in this free-range colony, the population of which has been increased. A caged colony of 70 females has been established also. Studies underway include evaluation of the effects of hormonal imbalance during gestation, and behavioral studies in the free-ranging monkeys as compared to the caged animals. Further studies are on the effects of commonly occurring diseases on the offspring, and especially the demonstration of the clinical and pathological effects of oxygen deprivation or asphyxia in the newborn animal.

It already has been demonstrated that asphyxia of the newborn monkey leads to diffuse damage of brain cells. The nature of this damage is such that in a surviving animal the healing process would leave no permanent evidence of the loss of tissue. In humans, this means that pathological study in later life would give no clue of the occurrence of brain damage and loss of tissue from neonatal asphyxia.

THE ASIAN INFLUENZA PROJECT

The organization and facilities developed in these collaborative field investigations also are proving of value in connection with a closely allied concern—that of determining the effects of the Asian flu virus on the fetus. Previous studies have indicated that the virus of German measles is capable of producing fetal injury and maldevelopment. The Asian flu epidemic has provided a unique opportunity to find out whether this virus also is capable of producing fetal injury. Because of certain characteristics of the current epidemic, this Institute recognized that if specimens of blood serum could be obtained from pregnant women during and after this epidemic, it would be possible to determine whether they actually had been infected by this virus. Followup study of the children of those who were or were not so affected would provide evidence as to whether such infection does lead to increase in pregnancy wastage, maldevelopment, and defect of the child. At the present time, it is anticipated that approximately

10,000 patients will be studied whose pregnancy occurred during the period of the Asian flu epidemic.

CEREBROVASCULAR DISEASE

The inadequacy is recognized of present methods of diagnosis, treatment, and rehabilitation of patients with cerebrovascular diseases, such as stroke, which rank third among all diseases as a killer, and first as an adult crippler. Therefore, the Institute initiated a large and comprehensive cooperative program of clinical study of aneurysms (abnormal ballooning of blood vessel walls caused by injury or congenital factors), and of acute hemorrhage under the brain covering (subarachnoid) when the aneurysm breaks.

In addition to studies of the causal factors related to these disorders, an evaluation will be made of various surgical and nonsurgical treatments in terms of the mechanism of action and in terms of the clinical results over long periods of time. Twelve medical centers are participating in this program.

Another program has been launched to determine the effectiveness of anticoagulant drugs in preventing cerebral strokes. This new program, which is scheduled to last for 3 years, was made possible by grants totaling about $58,000 to the 6 participating medical research centers. An estimated 1,800 patients will participate in the study. This total is far beyond the number which would be available for such an investigation by any one of the participating institutions, except over a period of many years.

There is considerable evidence that anticoagulants properly administered tend to prevent the "slow" or "little" strokes, or their recurrence. Besides, this study, which will follow a uniform scientific protocol adopted by all the participating centers, will set up the machinery necessary for the evaluation of any preventives or treatment that might be devised for strokes in the future.

INFECTIOUS DISEASES OF THE NERVOUS SYSTEM

The development of a vaccine for infantile paralysis has resulted in a shift of interest to other infectious diseases of the nervous system, especially in regard to their aftermath of the brain damage sustained from the infection. Consequently, the Institute is developing a cooperative project for the study of the aftereffects of insect-borne diseases affecting the brain.

These disorders are related to the occasional aftereffects of the common infections of childhood, such as mumps and measles. This investigation is a step toward determining how frequently such conditions lead to minor neurological defects manifested by disturbed behavior and inferior mental capabilities, and to what extent they can be prevented and treated.

FIELD INVESTIGATION OF "KURU"

Recently there was discovered among the natives of New Guinea an illness spoken of as "kuru," which means "the shakes." It occurs in a limited geographical area (the total population involved is probably about 15,000), but within this group approximately 1 percent of all the people are affected, and it is reported to be responsible for 50 percent of all deaths in certain areas.

Although the total number of affected individuals is small, the disease is of interest because of its similarity to a number of other, more widespread degenerative diseases of the nervous system.

The Institute has been playing an active supporting role in these investigations being carried out in new fields. Pathological material, including six brains and other specimens forwarded to Bethesda from the field, are being studied.

Preliminary autopsy findings suggest that the disease has a toxic origin, which has led to a field investigation for factors of diet which may be responsible. These studies may provide clues for the investigation of other nerve disease conditions of a serious nature.

BIOSTATISTICAL ANALYSES AND CONTROLS

In order to provide coordination and support for its several collaborative field investigations, the Institute is expanding its biometrics branch. This branch has the heavy responsibility of processing the data derived from these collaborative studies. In many instances, the raw data itself is being forwarded to them for coding and analysis. Their guidance in study design and statistical analysis is in increasing demand not only by the cooperating groups but also by other investigators who turn to them for consultation.

The status of research in various categorical diseases in which this Institute has particular interest is reviewed in the following section.

EPILEPSY

Research in epilepsy demonstrates how divergent approaches may converge at a point. Clinical studies of epilepsy have concentrated primarily on the classification of seizures and on the testing of drugs. The discovery of new anticonvulsant drugs has come about as the result of the screening and testing of new chemical compounds, first on animals and then on man.

Through these studies the number of anticonvulsant drugs has risen from bromides as the only effective drug, until 8 or 10 useful drugs now are available to the clinician. The control of seizures likewise has risen to the point where nearly 80 percent of epileptics may be managed effectively by drugs now available.

However, this type of research has been carried through almost exclusively on a clinical or patient care basis, and without knowledge of the basic processes involved. A further advance comes from the study of the actual physiological mechanisms of a seizure. Electroencephalographic techniques have demonstrated the importance of electrical changes occurring in the brains of epileptics.

More recently, microelectrode techniques have indicated intensive overactivity in the affected brain cells. Researchers are now concentrating on the minor electrical changes in membranes of nerve processes and nerve cell bodies which occur during seizures.

In fiscal year 1955, we reported that one of our research teams in Bethesda had opened a new vista in epilepsy research, through the development of a neurochemical approach. After preliminary investigations on animals, it was discovered that the brain cells of epileptics were deficient in glutamic acid. Also discovered was the fact that this deficiency could be overcome by the administration of glutamine or asparagine. When the glutamic acid deficiency was overcome in this way, seizures of many epileptic patients were controlled.

This breakthrough indicated that eventually epileptic seizures could be controlled by a natural body chemical, which would have infinite advantages over the currently used antiseizure drugs, since the latter are basically sedatives or depressants of the entire nervous system, and therefore often cause drowsiness and other annoying side effects.

The Institute, in collaboration with six medical centers, has conducted extensive clinical studies for the evaluation of asparagine in the control of all types of epilepsy. The results indicate that asparagine is effective in about 40 percent of all cases. However, it is relatively high in cost; there are difficulties in its administration because of its bulk; and occasional undesirable gastrointestinal side reactions follow. Therefore, it is apparent that asparagine could not compete successfully with other less expensive antiseizure drugs, except in unusual cases.

Why asparagine is effective in some cases and not in others seems to be because (1) asparagine metabolizes rapidly, and, therefore, in some patients may be destroyed before an adequate concentration is reached in the brain cells; and (2) other unknown factors in brain metabolism may play a role in causing epileptic seizures. These are problems which are now being explored.

For example, Institute scientists are devising methods for determining more accurately the levels of glutamine and asparagine in the body fluids of man, so as to better estimate its absorption by the brain cells.

In addition, they are testing the role played by another substance in brain metabolism, which also may influence epileptic seizures. This substance is called gamma-aminobutyric acid or GAB. It has been shown that this chemical GAB, newly discovered in the brain, is related to glutamic acid metabolism in the brain and together with vitamin B_6 acts as an inhibitor of nervous activity. In fact, it has been shown that the changes produced in the excitability of brain cells by the administration of dilantin, an anticonvulsant drug, correlate with alterations in the concentration of GAB in the brain cells. These new discoveries provide new leads for the control of epileptic seizures through natural body chemicals.

Also during the past year, Institute investigators have continued their studies on the surgical treatment of epileptic patients, whose seizures result from a localized area of brain damage, in the temporal lobes of the brain. These are the patients suffering from so-called psychomotor epilepsy. Already 117 of these patients having seizures which were uncontrolled by medication have been operated on in Bethesda. Of these, 55 percent have had 1 or less seizures since

operation, 33 percent had 3 or less seizures following surgical treatment, while only 15 percent had as many attacks after surgery as before. This 15 percent concerned patients with extensive damage in both temporal lobes of the brain.

MULTIPLE SCLEROSIS AND DEMYELINATING DISEASES

The Institute is pressing its attack on a serious problem of multiple sclerosis and demyelinating disorders, along five major fronts: (1) the anatomical; (2) the chemical; (3) the experimental; (4) the etiological; and (5) the epidemiological.

This five-pronged exploration aims to discover the structural and chemical basis for the formation and construction of myelin, a fatty substance that makes up the protective sheath which insulates the nerve fiber tracts of the brain and spinal cord, and which disintegrates in multiple sclerosis. Additional aims are to induce demyelinating disorders in animals for experimental studies; to evaluate suspected causes of demyelination, that is, microbes, viruses, allergy, toxins, or metabolic factors; and to study the variations in the prevalence of multiple sclerosis in different geographical areas, in order to uncover new leads.

Last year we reported that an Institute grantee, using the electron microscope, discovered that the myelin sheath of peripheral nerves (as opposed to the nerve of the brain and spinal cord) developed as a result of a spiraling of the membranes of certain satellite cells around the nerve fiber—cells known as Schwann cells. Later this clue led to the demonstration, also with the electron microscope, that myelin in the central nervous system originates also from satellite cells. These are known as neuroglia, more specifically the oligodendrocytes. These discoveries were major breakthroughs on a structural side.

This year there has been a breakthrough in chemical studies. An Institute scientist has discovered and characterized the specific manner in which a substance called sphingosine is synthesized in the body and has succeeded in synthesizing this vital compound in the laboratory by biochemical means. Sphingosine is a fatty amino-alcohol compound which is an essential element in the lipids (cerebrosides, gangliosides, sphingomyelin) found in the myelin sheath.

Sphingosine and the lipids, of which it is a part, tend to disappear during the process of demyelination, as for example in multiple sclerosis. On the contrary these lipids accumulate in excessive amounts in such disorders as Tay-Sachs disease. The synthesis of sphingosine and the knowledge of its related enzyme systems, therefore, provides another experimental key to unlock the mystery that surrounds the formation and structure of myelin.

As reported last year, it is now possible to produce in animals a disorder, closely resembling multiple sclerosis, which is called allergic encephalomyelitis. Because of the important implications of this discovery, the Institute this fall sponsored a symposium on experimental allergic encephalomyelitis which has led to greater activity and research in this field.

The Institute has continued its search for a possible microbiological etiology in multiple sclerosis. This year in Bethesda, 30 well-documented cases of multiple sclerosis of increased severity were studied. The spinal fluid of these patients was carefully examined for micro-organisms.

In addition, specimens of blood and spinal fluid from these patients were sent to the laboratories of the National Institute of Allergy and Infectious Diseases and of the University of Cincinnati to investigate the validity of the antibody response to the antigen of material obtained from the U. S. S. R. The results of these studies have not as yet been reported.

The Institute continues its epidemiologic studies of multiple sclerosis and demyelinating diseases with the hope of eventually turning up new clues for the causes of these conditions. Multiple sclerosis is far more common in the northern part of the United States than in the South, and it is more prevalent in European countries than in certain eastern countries. Its prevalence in Japan is now being investigated under an Institute project.

MUSCULAR DYSTROPHY AND NEUROMUSCULAR DISORDERS

Muscular dystrophy and neuromuscular disorders have been a major research target of the Institute's clinical investigators and scientists since the inception of the clinical center program. Because of the complexity of these conditions and their relative neglect in medical research, the attack on muscular dystrophy, like the one on multiple sclerosis, has been a many-disciplined one. The attack

uses new research techniques in laboratory research and in testing animal and human patients. Each year we have reported new findings from this research effort which all are essential for the final piecing together of the missing links in the understanding of these perplexing disorders.

All these studies are continuing unabated and new ones have been introduced. An important chemical constituent of dystrophic muscle has been isolated from patients and from mice having a disease resembling human muscular dystrophy. Plans are underway to synthesize this chemical substance in living uterine muscle.

Using the basic data recently published in the Institute-created Atlas of Muscle Pathology, Institute investigators have discovered a new disease of muscle. New interest is focusing on the disease problems of weak-muscled infants, and it has been demonstrated that muscle biopsies are important to accurate diagnosis of such infants. Among 22 infants examined, 4 distinct types of muscle disease and nerve disease distinguishable by muscle biopsy have been differentiated.

The mechanism of nerve-muscle transmission also is being attacked both in its basic mechanisms through animal experimentation, and in patients suffering from myasthenia gravis. Efforts are being made to demonstrate the presence of inhibitor-paralyzing substances in the sera of patients with myasthenia gravis, as well as to study the action of drugs.

By using a tagged isotope, researchers are studying what happens in a single enormous nerve cell of the squid. As yet, no final answers have been found as to the chemical process involved. But the answer for normal function would provide the basis for solving vital unknowns in nerve-muscle disease.

PARKINSON'S DISEASE

Important advances in the surgical treatment of involuntary movements already mentioned have a practical bearing on Parkinson's disease, familiarly known as shaking palsy.

Although surgical intervention offers considerable hope, the present therapy for relief of the rigidity, tremors, and involuntary movements of Parkinson's disease and related conditions still rely heavily on the use of drugs. A number of drugs have been found to be moderately effective in the relief of tremor and spasm.

In the past, techniques for the evaluation of these drugs have been very limited since there is difficulty in establishing this type of clinical picture in experimental animals. Last year it was reported that Institute scientists had discovered that continued doses of resperine in monkeys not only produce a clinical picture resembling Parkinsonism, but also produce anatomical changes in those areas of the brain frequently affected in this disease. Work is continuing to determine whether animals prepared by this technique may prove useful as experimental tools for the evaluation of anti-Parkinsonism drugs.

These surgical and medical techniques used in Parkinson's disease are palliative only. The collaborative study of the after-effects of insect-borne virus diseases is one effort to seek cause and prevention. It is well known that the 1918 epidemic of influenza was followed by Parkinsonism in a considerable number of instances.

Sporadic cases of Parkinsonism, resembling those which followed this epidemic, are still being seen but the nature of the virus, if one is responsible, has not yet been determined. The study of insect-born encephalitides is one step toward clarification of this confused situation.

EYE RESEARCH

Since August 1955, when one of the world's most eminent research ophthalmologists, Dr. Ludwig von Sallmann, joined this Institute, both basic and clinical research on diseases of the eye have increased steadily. A nursing unit of 25 beds for clinical research in ophthalmology is in full operation.

The research is directed at the blinding diseases, for many of which the cause is unknown and the treatment is palliative rather than preventive. Glaucoma, cataract, uveitis, retinopathy, and ocular tumors continue to be the major causes of blindness.

You will recall that the program on retrolental fibroplasia, which was initiated in 1954, was successful. Within 2 years of cooperative research, the cause was identified and all the pediatricians and hospitals in the United States were alerted as to the proper preventive measures. Since 1956 the frequency of the disease has diminished greatly.

Last year you were advised that progress had been made in developing diagnostic and treatment techniques for uveitis, a blinding disease caused by tuberculosis, syphilis, brucellosis, and toxoplasmosis. With the cooperation of the National Institute of Allergy and Infectious Diseases, the evaluation of these techniques is continuing. Disorders of function of the thyroid gland seem to be related to recurrent cases of uveitis, so hormonal studies of these patients have been initiated.

The use of radioactive indicators and autoradiographic techniques was reported two years ago. These developments are being improved further for the detection and localization of tumors of the eye and the orbit. The incorporation of radiophosphorus and other radioactive isotopes by malignant tumor cells are being studied.

Last year electroretinography was reported to be useful in the detection and differential diagnosis of congenital versus environmental factors in diseases of the retina. With the use of additional techniques and with the aid of visiting scientists, these studies have been extended further.

New research is adding credence to last year's report on the suspected neural mechanisms controlling pressure within the eye. The nervous pathways are being traced from the eye to centers in the brain. In addition, studies are underway of the mechanisms of inflow and outflow of fluids of the eye by recording changes in internal eye pressure for periods of time and under the effects of various drugs. These may lead to modifications in the diagnosis and treatment of glaucoma in patients.

Biochemical analyses of the lens and morphological studies of its ultrafine structure are providing new leads to the factors which produce cataracts.

AGING AND THE NERVOUS SYSTEM

A reduction in intellectual faculties with advancing years is a phenomenon which has come to be looked upon almost as an inherent characteristic of living organisms. However, experience in our lifetime has demonstrated that the life span itself is not a fixed entity. It is in fact extremely unlikely that the aging process is an inevitable one.

An exact knowledge of the anatomical and the chemical changes in advancing years is the first step toward the discovery of how to modify changes to achieve longer years of intellectual and physical usefulness.

In January of this year the Institute sponsored a conference on the aging process of the central nervous system. The results were encouraging. An actual loss of nerve cells during aging has not been proven to be the basis of the aging process. There are changes in the dendrites—the fine connections which are associated with interactivity of the nerves and nerve cells within the brain—and in addition, in the structures which provide nourishment to the nerve cells, but the nerve cells themselves may be spared.

At this conference it was pointed out that, for further studies of the aging process, colonies of young and old animals should be established so that investigators studying changes of a progressive nature can be assured of animals of known age and health for study. Institute-supported laboratories are now developing colonies of guinea pigs and rats for this purpose. These animals are being used for the demonstration of changes in chemistry and structures taking place throughout the lifetime of the animal.

DISORDERS OF HEARING AND SPEECH

The multidisciplinary approach to a single problem is strikingly demonstrated when one considers recent advances in the field of hearing and speech. Here combinations of the techniques of anatomy, physiology, and psychology have led to new advances. Using new staining techniques, the anatomists have demonstrated in the brain and ear the exact location of the important nerve endings.

By means of delicate recording needles thrust into these structures, the physiologists and biophysicists have traced the activity of these nerves, testing their response within the sensitive receptor cells of the ear, along the pathways by which they are conducted to the brain, and in the brain itself. Using the conditioned reflex techniques of the psychologist, animals have been trained to respond to various types of auditory stimuli.

Using the physiological techniques described above, the electrical changes of the ear and brain which accompany these patterned responses have been correlated. Changes in these patterns which result from disease or injury are demonstrated in operated animals.

Finally, through clinical examination of patients whose brains have been harmed by injury, strokes, or tumor, exact knowledge of the anatomical and functional derangements which results can be established.

During the past year, the old concept that in left-handed individuals the speech center lies in the right side of the brain has been revised. Important differences in the language function between right-handed and left-handed individuals have been demonstrated. It has been shown that the majority of people have their brain center for speech in the left side of the brain, regardless of their handness. However, in left-handed individuals, the dominance of the left hemisphere is less complete, and surgical removal of this area is less likely to lead to permanent loss of speech than in the right-handed person.

Such discoveries have important implications in respect to the training of children suffering from handicaps in speech and reading, as well as in the reeducation of adults whose language has been harmed through disease.

NEUROSURGICAL INNOVATIONS

Hypothermia or "cooling" of the brain is one of the recent innovations in neurological surgery. Formerly, it was not possible to interrupt the circulation to the brain for more than a few seconds. Now, it has been demonstrated, that, when the body and the central nervous system are cooled the circulation can be interrupted for periods of time up to 45 minutes without the occurrence of permanent brain damage. This diminishes the risk of hemorrhage in long, intricate, brain operations.

Hypothermia has been particularly valuable in connection with aneurysms (ballooning) occurring in the brain. This condition, associated with weakness of the walls of the major arteries with resultant rupture, formerly carried a 50 percent mortality rate.

Surgical intervention was extremely hazardous, largely because of the impossibility of cutting off the circulation during the time when repair of the artery was being attempted. Operation on aneurysms now can be carried out in a bloodless field—the vessel can be tied off or resewed with comparative ease. Thus, a marked reduction in operative mortality has been accomplished.

In order to evaluate further the safety and effectiveness of these surgical procedures in respect to aneurysms of various cerebral arteries, the Institute has undertaken its cooperative investigation of surgical techniques in cerebral aneurysms, hemorrhages, blood clots, and malformations of the cerebral blood vessels. Another aim of this study is to make possible the more accurate selection, from among patients suffering from strokes, of those most likely to benefit from surgical or nonsurgical therapies.

PLANS FOR FISCAL YEAR 1959

The Institute's plans for fiscal year 1959 are to continue to consolidate and implement the programs in research projects, both basic and clinical, and the programs in collaborative and cooperative field investigations. It is intended as far as possible to maintain the current balance of effort between project research and field investigations. In the field investigations the Institute continues to function as a central laboratory and to provide leadership, counsel and guidance specifically in the areas of biometry and epidemiology.

EFFECT OF HOUSE ACTION

The House provided an increase of $1,250,000 for this appropriation of which $1,170,000 will be applied to research projects for studies relating to the perinatal period and such diseases as multiple sclerosis, amyotrophic lateral sclerosis, epilepsy, cerebral palsy, muscular dystrophy and Parkinson's disease, together with the studies fundamental to all neurological and sensory diseases.

In addition, $50,000 will be devoted to expansion of direct research in the fields of sight and hearing and $30,000 for the processing, analyzing and management of the grants and awards.

Recent Advances in Research on Neurological and Sensory Disorders
January–March 1958

ITEMS OF INTEREST ON PROGRAM DEVELOPMENTS AND RESEARCH STUDIES CONDUCTED AND SUPPORTED BY THE NATIONAL INSTITUTE OF NEUROLOGICAL DISEASES AND BLINDNESS

Evaluation of anticonvulsant therapy in epilepsy treatment

Phenobarbitone, an anticonvulsant, was found beneficial as an initial treatment in certain cases of epilepsy when followed by other specific anticonvulsants, according to an National Institute of Neurological Diseases and Blindness grantee.

Dr. H. Houston Merritt, director of graduate training in clinical neurology at the College of Physicians and Surgeons, New York, bases his conclusions on a study of 319 patients with epilepsy treated with various anticonvulsants. Following the use of phenobarbitone, hydantoin preparations or mysoline was administered for major epileptic attacks and trimethadione for petit mal attacks. In the group under study, seizures were controlled in 154 patients (48 percent), improved in 118 (37 percent). No improvement was noted in 47 patients (15 percent).

Dr. Merritt briefly describes the history of anticonvulsants. The first effective one was bromide, used as early as 1859. Phenobarbitone was first used in 1912 and hydantoin was introduced by Drs. Putnam and Merritt in 1937. Dr. Merritt also discussed the more recent drugs. For example, phenacetylcarbamide is useful in treating temporal lobe epilepsy although it produces toxic side effects. Milontin and Diamox are both useful in patients with petit mal. The three principles which guided his treatment of epilepsy in the study were the removal of causative and precipitating factors where possible, the establishment of regular physical and mental habits, and the use of appropriate drugs. Most cases could be controlled with 1 or 2 remedies. In rare cases, however, as many as four were given.

Methylphenidate combats depression caused by certain tranquilizers

Methylphenidate hydrochloride, a stimulant, is reported to reverse the depressing action of promazine, a tranquilizer, in a study of 21 patients by NINDB grantees at George Washington and Georgetown University Medical Divisions and the District of Columbia General Hospital.

The drugs, given separately and in combination, were found to have no significant effect either on cerebral blood flow or oxygen consumption. Methylphenidate, however, was found to be effective in reversing the depressing action of promazine. Such a depression may lead to confinement in a mental hospital or to suicide.

It was pointed out that the new tranquilizer, promazine, appears to offer considerable promise in the control of physically overactive patients. Furthermore, the patient's response to methylphenidate, after sedation with promazine, generally consisted of increased alertness, ease of speech, or improved articulation. These results suggest the usefulness of methylphenidate as an antidote to depression caused by the tranquilizers of the phenothiazine group.

Blood serotonin level drops after reserpine treatment; no change after shock therapy

The blood level of serotonin (5–HT), a substance believed to be involved in nervous system function, decreases after reserpine treatment. No change is noted in 5–HT levels after electro-shock therapy, according to NINDB grantees at Yale University School of Medicine.

The Yale group reports the results of a study involving the administration of reserpine to 10 patients during a 3-week period. They found that the blood level of 5-hydroxytryptamine (5–HT, serotonin) in most cases decreased to nondetectable levels. Three weeks after withdrawal of the drug, 5–HT levels had risen but had not reached normal values.

At the same time, the effect of electro-shock therapy on blood levels of 5–HT was studied. The investigators state that since permeability of the so-called blood-brain barrier is increased (at least in certain respects) after electro shock, it was thought that a change in concentration of 5–HT in the brain might be reflected by concentrations in the blood. It was found that electro-shock therapy did not alter the levels of 5–HT in the blood.

The study substantiates previous work involving animals treated with the tranquilizing drug, reserpine. The brain and other body stores of the animal became depleted of their 5–HT. It has been demonstrated further that this 5–HT-releasing activity is limited only to those Rauwolfia alkaloids with tranquilizing action

Sodium bicarbonate effective antidote for phenobarbital

Phenobarbital poisoning can be treated effectively through intravenous infusion of a concentrated solution of sodium bicarbonate, according to NINDB grantees at the University of North Carolina School of Medicine.

In a report in the Journal of Clinical Investigation, Drs. William J. Waddell and Thomas C. Butler indicate the procedure involves minimal risk and requires no special equipment.

The investigators have shown that sodium bicarbonate can shorten phenobarbital coma by rendering the body more alkaline. In deep coma the blood pH (hydrogen iron concentration) is lowered, allowing more phenobarbital to enter the brain and extend the depression. Raising the blood pH with sodium bicarbonate lightens the depression and allows some of the phenobarbital to pass from the brain.

Sodium bicarbonate was also found to increase the rate of elimination of phenobarbital, normally the most slowly eliminated of the commonly used barbiturates. This alkalinizing treatment, however, was found to be less effective with other barbiturates.

Language function test recommended at 2½ years to detect basic defects

Speech and hearing group makes recommendations for testing and evaluating language function in connection with the collaborative cerebral palsy project of the National Institute of Neurological Diseases and Blindness.

A speech and hearing conference, March 3, 1958, recommended that children be examined for basic speech defects at 30 months. A language function test at this age may recognize basic defects more clearly than at a later age when the child has developed adaptive mechanisms, secondary reactions, and inhibitions as a result of training and experience.

The conference, of NIH staff members and representatives from non-Federal institutions, is one of several called to consider fundamental problems in relation to the collaborative cerebral palsy project.

Isolated brain kept alive by artificial blood supply

A method of isolating a cat brain from its blood supply and keeping it alive by artificial blood has been perfected by an NINDB grantee at the University of Illinois. By the addition of various compounds to the artificial blood, brain functioning and metabolic pathways can be studied.

The artificial blood is introduced into the arteries to the brain, according to Dr. Alexander Geiger, and collected as it returns through veins of the brain. The isolated brain continues to exhibit normal electrical activity and normal control over the muscles of the face. Further, the isolated brain continues to have normal blood pressure.

The addition of compounds, such as radioactive sugar, to the artificial blood, permits the study of the metabolic pathways concerned with the maintenance of energy supplies to the brain. It is also possible to produce simultaneously changes in other organs of the body. Thus, Dr. Geiger is able to study not only normal brain functioning but also brain functioning when other organs are impaired.

Excess blood ammonia in infants may be brain damage factor

Ammonia poisoning may be a factor in the development of kernicterus and cerebral injury in infants born of Rh-negative mothers by lowering the brain's resistance to damage by bilirubin.

Drs. Samuel P. Bessman and Martin K. Gorten, NINDB grantees at the University of Maryland Medical School, are investigating the relationship between hyperbilirubinemia and high blood ammonia levels in children born of Rh-negative mothers. Investigation of 16 children with hyperbilirubinemia severe

enough to require exchange transfusion has revealed blood ammonia levels considerably higher than normal.

As a result of this study, these investigators postulate that elevated blood ammonia may cause a specific chemical lesion in the brain, thus rendering the brain susceptible to further damage by bilirubin. Once the brain is damaged by bilirubin, the lesion is irreversible, with the resulting effect being a cerebral palsied child.

Drs. Bessman and Gorten feel that treatment of hyperbilirubinemia may include attempts to lower the blood ammonia of these children as well as to perform exchange transfusion.

These investigators and others have previously shown that high blood ammonia levels are also found in cases with damaged or immature livers. Current research is also being directed toward investigation of liver function in normal newborns and in children born of Rh-negative mothers.

Lack of cerebral blood supply related to anencephaly (absence of brain)

Abnormal development of cerebral blood vessels plays an important causative role in producing anencephaly (congenital absence of the brain) in humans, according to an NINDB grantee at the New York Hospital, Cornell Medical Center.

A definite relationship has been shown by Dr. F. Stephen Vogel between abnormalities of the cerebral blood vessels and amenchepaly, the most common lethal congenital defect.

On the basis of autopsy of 9 anencephalic fetuses and one 2-headed fetus, with 1 normal and 1 deformed head, Dr. Vogel has concluded that vasucula anomalies and anencephaly occur simultaneously. Previously, Dr. Vogel has shown that anencephaly in young embryos can be produced by disturbing the cerebral blood supply.

In view of the research findings and the recent human autopsy findings, Dr. Vogel states that it is possible that the abnormal blood supply is an underlying factor in this lethal defect.

Similarity noted between two types of atrophy

Atrophy due to insulin injection was found to be similar to the wasting in Gowers' "local panatrophy," in a recent NINDB study.

The case reports of two patients with different types of fat and muscle wasting were compared by Drs. Kenneth R. Magee (formerly of NINDB) and MacDonald Critchley of the National Hospital, Queen Square, London. Similarity was noted between the atrophy in Gowers' "local panatrophy," a wasting disease attacking various parts of the body, and atrophy in diabetes which showed wasting in areas of the body far removed from the point of insulin injection. Few such cases have been reported. Atrophy at the site of insulin injection, however, is fairly common.

The study suggested to the investigators that a possible allergic reaction is present in the diabetic case rather than any direct localized action of the insulin. Furthermore, it is thought that insulin may provoke Gowers' local panatrophy in susceptible patients or precipitate otherwise latent or slight cases.

No definite conclusions were drawn concerning the relationship of the two diseases. However, the doctors stressed the value of further case reports and the importance of muscle biopsy for complete evaluation.

Rabbit lens study directed to senile cataract development

The general theory that metabolic activity of the lens decreases with advancing age is supported by a comparative age study by a NINDB grantee using rabbit lenses. Transparency of the lens is believed to be dependent upon active metabolism of the tissue.

This study, by Dr. Harry Green of the Wills Eye Hospital, University of Pennsylvania, is in line with recommendations strongly urged at a NINDB-sponsored Symposium on Aging that comparative studies be made on animals of known ages.

The findings constitute a major step in the search for the responsible factor in the development of senile cataract, one of the most common types of ocular ailments in older persons. It is the generally accepted concept that the transparency of the lens is dependent upon the active metabolism (use of food substances) of the tissue. It was pointed out, however, that practically no information is available on normal human lens metabolism.

Extracts of lenses from 1-month-old rabits were compared with those of 3-year-old rabbits as to their ability to produce lactic acid from glucose and other specific substances. Lactic acid is the end-product in the metabolism of the lens.

Dr. Green states that on the basis of the whole lens, the older lenses have a greater content of active enzymes, and thus a greater capacity to produce lactic acid. But the younger lenses, he adds, showed the greater metabolic efficiency when calculated on the basis of activity per 100 mg. wet weight or per milligram of protein. These chemical changes appear to follow what is known about the aging process in the normal, transparent lens.

Evidence of nerve-fiber degeneration in optic-nerve atrophy case

A new silver staining technique indicates that glassy substances (hyaline corpuscles) in the human optic nerve may be evidence of nerve-fiber degeneration.

This technique was used by Drs. J. Reimer Wolter and Leopold Liss, NINDB grantees at the University of Michigan, to study the formation of hyaline bodies in the eyes of a patient with optic-nerve atrophy resulting from a brain tumor. It was observed in this case that many of the surviving nerve fibers did not run up to the brain, as they normally do, but were interrupted at different points along the pathway of the optic nerve. At the proximal end of each interrupted fiber, there first appeared a swelling composed of nerve-fiber substance and free lipoids that later underwent hyalinization. Concomitantly, there was a retrograde degeneration of the distal portion of the nerve fiber, leaving free the hyalinized corpuscle.

Previous work by Drs. Wolter and Liss has shown that similar hyaline bodies may result from a process of degeneration of astrocytes within the optic nerve tract, as well as the above mentioned process of degeneration of nerve fibers. These studies add further information on the nature and mechanism of formation of hyaline corpuscles, a common finding not only in the nerve fiber but also in the retina of many older persons.

Dr. Bailey. Since this statement, however, there have been additional program developments which, I believe, deserve your attention. They concern our projects in brain tumor detection, epidemiology, and our project in the prevention and treatment of strokes, and also a slight breakthrough in our collaborative project on neurological deficits resulting from adverse influences in the perinatal period.

INSTRUMENT FOR LOCALIZING BRAIN TUMORS

Last year, you remember I described an instrument which we were perfecting for localizing brain tumors, without even penetrating the scalp of the head. As you see, I brought a few photographs. The photograph before you demonstrates the method based on a scanning of the head of a patient with a modified geiger counter, a patient who has been given an intravenous injection of radioisotopes.

Now the radioactive waves emanating from the patient's head that you see there are picked up by means of a diaphragm which is called a collimator. The collimator connects with a complicated system of amplifiers and electronic devices that eventually actuate a mechanical marker which makes tracings on paper such as this one here. [Indicating.]

Since the radioactive isotope concentrates more heavily in tumor tissue than in the surrounding normal brain tissue, the dots made by the mechanical marker will be more concentrated and thus outline the size and locations of the tumor.

Senator Pastore. Is the isotope iron?

Dr. Bailey. It is iodine.

As a matter of fact, that record you are looking at was made on a patient we operated on about a month ago in the clinical center. This patient was a 64-year-old chauffeur who was admitted to the clinical center with a diagnosis of glaucoma. This only complaints,

actually, were an increasing loss of vision, and a loss of the sense of smell.

So we used this instrument and this record is what we found, as you see in this anterior view [indicating], a tumor right in the midline of the brain. It is really at the base of the frontal lobes, and you can see it on the lateral view as situated here [indicating].

So, you see, our brain tumor detector showed that this patient did, in fact, have a tumor, and it also shows you the general location and size of the tumor.

Now, to make it a little more clear to you, I brought an artist's drawing of how a typical tumor of this kind appears. This is a section of a cut through the middle of the head [indicating]. Here are the frontal lobes, and here is the tumor, about the size of a lemon, and it is pressing the frontal lobes upward against the skull, and it is compressing the nerves of sight and of smell here, which accounts for a gradual loss of sight and smell.

Senator HILL. The more the pressure grows, the less sight and less sense of smell he actually has?

Dr. BAILEY. Yes, and also taste, being closely allied to smell.

IMPORTANCE OF PRECISE LOCALIZATION

Now, as you know, the only cure we have for brain tumors today is surgical removal, whenever these tumors are operable. The success of the operation depends on an early and precise localization of the tumor—it must be early, so that too much brain tissue will not be destroyed; and it must be precise, so that you can go in at the right place. If you went in on the wrong side of the head, for instance, it would be worthless.

Senator HILL. It would be worse than worthless, would it not, Doctor?

Dr. BAILEY. Much worse than worthless.

Now this tumor [indicating] we knew was alined right on the bone here. It was an encapsulated tumor; therefore, all we had to do was lift up the frontal lobes and scoop out the tumor.

This patient was operated on about a month ago and is doing quite well.

Senator HILL. There is no malignancy in there at all?

Dr. BAILEY. No, sir. This is not a malignant type of tumor [indicating].

Senator HILL. I do not want to interrupt your testimony, but I think Senator Pastore and I would be interested in knowing what the chances of recurrence of another tumor is, perhaps, in that area?

Dr. BAILEY. In this particular case, the chances of recurrence are practically nil because it was a encapsulated tumor, did not infiltrate the brain, and was completely removed.

Senator PASTORE. This is what intrigues me, the success of this, and the fact that it has only been tried once.

Dr. BAILEY. Oh, no. Last year we had only done a few cases when I had first reported our building of this instrument and the perfecting of it. Today, we have tested 179 patients with tumors, and our localizations have been proved to be correct by surgical biopsies in over 86 percent of the cases.

OTHER METHODS OF LOCATING TUMOR

Senator HILL. I do not want to interrupt you, but what would be interesting for this record, and for our information, would be a comparison now, just very briefly, of this instrumentality which you have here, a comparison with the old X-ray. That is about what you had in the past, is it not?

Dr. BAILEY. Well, we had more than the X-ray and still do. The X-ray, of course, for brain tumors is of no value unless the tumor is calcified.

Senator HILL. Then it would not show up.

Dr. BAILEY. No, it does not show up.

Then we have the techniques of air injection into the ventricles of the brain. The air provides a contrast medium in the ventricles which roughly correspond in the brain to the chambers of the heart; and, by viewing the displacement of adjacent structures, we can project about where the tumor is.

We have had several cases in these air studies which appeared absolutely normal. One was a case diagnosed as a stroke and the air encephalogram was normal, but the brain scanning indicated that he had a tumor about the size of an orange in his head which was removed.

In addition to these air studies, we have electroencephalography, which is easy, but not too reliable, for the diagnosis of tumors. Returning to the air studies, the disadvantage of ventricalography is that when you put air in the head in the case of a suspected tumor, you usually put it in from the top. You must make a burr-hole in the skull, and you must insert the needle through the brain substance in order to inject the air into the ventricles.

It is not a very comfortable procedure and is associated with some risks, particularly in pneumoencephalogram where you inject air from below [indicating] into the spinal canal, which rises up into the ventricles of the brain. This procedure is followed by very severe headaches, which last until the air is absorbed.

The new tumor detector is absolutely painless. You do not have to cut, you do not even have to cut the skin of the scalp. It takes about an hour and a half to scan the complete head.

I think we have a real contribution here, and that it can be adapted with further improvements for mass screening of brain tumor patients.

LOCATION AND COST OF COLLIMATOR

Senator PASTORE. How many of these instruments do we have?

Dr. BAILEY. One.

Senator PASTORE. Where is it located?

Dr. BAILEY. In Bethesda at the clinic center. I think eventually it will become standard equipment—it, or some modification of it, in most large general hospitals in the United States.

Senator HILL. Of course, your first piece of equipment ordinarily would cost more than other models which follow. What did it cost for that particular piece of equipment?

Dr. BAILEY. Well, in building any new instrument, it is pretty expensive. The collimator we have right now is made of gold, and we were required to get $20,000 out of the Treasury.

Senator HILL. State that again, please, about that $20,000 out of the Treasury. I did not get that point.

Dr. SHANNON. Well, gold is not generally available for purchase, and the point Dr. Bailey meant to make was that it was part of the problem that had to be resolved in terms of obtaining the gold for instrumental use, which normally is held as bullion.

Dr. BAILEY. You see, gold is the most dense metal, and to make these radioactive rays converge and not deviate, and in order to get this kind of picture [indicating] the easiest way was to use gold.

Gold doesn't depreciate. It will get back to the Treasury.

Senator HILL. You mean the gold?

Dr. BAILEY. Yes.

Senator PASTORE. I do not know of any better standard for gold if this instrument works than that standard.

Senator HILL. That is a good contribution.

Senator PASTORE. It is even better than the gold standard.

Dr. BAILEY. But eventually some other metal will be used. I think it is also significant that probably only at the NIH could this have been done.

Senator HILL. Only what?

Dr. BAILEY. It is only at the NIH that this could have been done.

Senator HILL. Well, now, follow through on that a little bit, so that the record will be clear. Why did you say only in the NIH could this have been done?

Dr. BAILEY. I think it is easier for NIH to get gold than it would be, if you were in an outside university, and said you wanted $20,000 worth of gold.

Senator HILL. Yes.

Dr. BAILEY. Then, also, we have, naturally, protection such as is afforded by the FBI.

Senator PASTORE. I think I speak for Senator Hill in saying, when this becomes a little more universal, I would like to be cosponsor of a bill to make that the standard.

Senator HILL. Yes, we will make that unanimous.

EPIDEMIOLOGY OF NEUROLOGICAL SENSORY DISORDERS

Dr. BAILEY. Now I would like to say a little something about the epidemiology of neurological sensory disorders, or geographic pathology, as the Russians call it.

I think it is in this area of research that many of the great discoveries of the future will be made, just as they will be made in cancer and heart disease. Yet, now, there is a lack of development of this type of program which affects the nervous system, despite the fact that 20 million Americans are disabled by them; despite the fact that epidemiological and environmental research eliminated two severe neurological and sensory disorders, pellagra and retrolental fibroplasia; and despite the fact that the Institute's scientists have demonstrated that the prevalance of neurological disorders varies in different geographical regions—multiple sclerosis is much more common in the North than in the South, and ALS, or Lou Gehrig's disease, is 100 times more common in Guam than in the United States.

Also, for instance, we came across a rather odd disease known as "kuru" disease, which you may have read about in the newspapers, which is found in a primitive tribe in New Guinea.

They had this epidemic and still have it, which causes an extensive involvement of the nervous system characterized by shaking, laughter, paralysis, speech defects and mental changes.

We had only one scientist there, who sent us some specimens from the ones that died. In this way we obtained about 12 brains and spinal cords, which we examined. We found the type of degeneration in the brain and spinal-cord cells that is rather characteristic of toxic diseases of the nervous system.

Now the question is: Is "kuru" due to a toxin, or is there another etiological factor? If so, what is it? That is the sort of problem that requires further investigation.

We know, for instance, that there are environmental factors which will vary from one geographic area to another, such as mineral and trace elements of the soil and drinking water, and the variation in the incidence of certain infections and toxins.

To find the missing pieces of a puzzle of this kind, disciplinary lines must be crossed and a team approach, comprising many disciplines with an integrated focus, must be adopted. You have to mobilize a comprehensive attack, and it has to ramify in widely scattered geographical regions, an enterprise which naturally requires collaboration on a worldwide scale.

We have long since seen the handwriting on the wall of the need for this type of program, and we have been building an epidemiology department as an integral part of our planning.

As you can see, we made a study on multiple sclerosis in the United States and Canada and also on amyotrophic lateral sclerosis in Guam.

We went a little further last July in the First International Congress of Neurological Sciences and set up the First International Geomedical Congress on Neurological Diseases, which was initiated and sponsored by our Institute.

WORLD STUDY COMMITTEE ON EPIDEMOLOGY

A special committee has been formed to pursue these studies further throughout the world, and the efforts of this committee, I believe, can be implemented very easily through the newly created World Federation of Neurology, in the organization of which the Institute played quite a predominent role.

Senator PASTORE. You might have said this before, but it escaped me. Where had this been found, this disease, geographically?

Dr. BAILEY. You mean Kuru?

Senator PASTORE. Yes.

Dr. BAILEY. New Guinea.

Senator PASTORE. There is none here in the United States?

Dr. BAILEY. No.

Dr. SMADEL. Until this outbreak was found in this primitive tribe in New Guinea there were only about 10 cases known in the entire world which had some resemblance to this particular outbreak in the New Guinea natives.

Senator PASTORE. The symptoms are what? Laughing?

Dr. BAILEY. Laughing, shaking, paralysis, speech defects, and mental changes.

Senator PASTORE. Is there anything contagious in it?

Dr. SMADEL. No, sir, no evidence of contagion, but the disease progresses relentlessly through a period of about 1 year and death occurs at the end of the year no matter what is done, and the scientist that Dr. Bailey mentioned tried all sorts of therapeutic measures and none of them were of any value.

Dr. BAILEY. But the thing is, this is a disease confined to one region, not seen elsewhere, so there must be some explanation in that environment, inasmuch as there is no evidence that it is a genetic factor that can be found. It is this sort of study we can pursue on an international scale.

Senator HILL. You speak about death definitely occurring within a year's time. What do the autopsies show? What finally happens to bring about the final dissolution, so to speak?

Dr. BAILEY. It shows degeneration of the nerve cells, particularly most marked in what is known as the cerebellum, a part of the brain, which we can use this picture to demonstrate: Here, in the cerebellum there are marked changes, but very little in the outer covering or cortex of the brain; however, in the basal ganglia (that is what is inside here—indicating), there are quite marked changes which extend into the spinal cord.

EXAMPLE OF GEOGRAPHIC PATHOLOGY

Dr. VAN SLYKE. I think, Mr. Chairman, this should be pointed out as an example of geographic pathology. We have to go into every field as examples of things that occur only in certain areas.

For instance, in the Sahara, there is an area where the inside of the heart turns to scar tissue. Why? We don't know.

Senator PASTORE. For the purposes of the record and for illumination of the members of Congress, I would like to see something in the record basically as to what is the necessity of getting into this field when it has no geographical significance in so far as our own territory is concerned? What does it mean to us and why do we do it?

Dr. BAILEY. That is to get at the cause, because if it is only in one geographic area, there must be something in that geographic area that is producing it.

Senator PASTORE. Which would lend itself to our other basic research studies.

Dr. BAILEY. Yes, sir.

Senator PASTORE. I was trying to get into the diplomacy or the politics of it as against the science. Does it have any political value in doing this internationally?

Dr. SMADEL. It has great political value. Dr. Guderchek who is the man that is now with Dr. Pearce Bailey, who was in New Guinea recently, returned to this country to finish the work that he started.

The basic laboratory work has to be done back here, but one of the points that he and a number of Australian neurologists, and also some of the neurologists in Europe, were tremendously excited about was that these particular clinical signs and these particular lesions were the first evidence for a theory on nerve function and transmission, which is beyond my capability of explaining; but this was the first evidence that they had in human disease that some of their thinking on theoretical grounds might have some bases; and according to their hopeful ideas, the study of this disease, which is unique in the

jungles of New Guinea, might have a very profound effect on the understanding of neurological diseases in Europe and the United States.

Senator PASTORE. I just thought it was important to get that in the record.

Thank you.

WORK ON ENCEPHALITIS

Dr. BAILEY. Another area of importance is about the infectious diseases of the brain called encephalitis which may result in Parkinson's disease, mental retardation, epilepsy, or emotional disorders. These conditions also should be attacked through an epidemiological approach with a multi-disciplinary team.

The importance of these infectious diseases of the brain goes beyond the identification of the virus that causes them, because by the time the virus has been identified, the brain damage has already been done, which usually consists of some metabolic deficiency in the brain.

Successful management of these patients, then, does not depend altogether on knowing their cause or causes for these are irreparable past events. We must know the pathophysiological and biochemical effects of these brain fevers as well as their causes, so that we can develop satisfactory treatments based on a knowledge of the disturbed brain metabolism, that is, in addition to a vaccine, because we have new epidemics and you might know the viruses, but by the time you do develop a vaccine, the epidemic is past.

In this respect, eastern Europe and the U. S. S. R. have made progress. For example, in a recent study from Czechoslovakia of a tick-borne encephalitis, caused by a virus and transmitted by the bite of an infected tick, which also can be, or was contracted by the ingestion of unpasteurized goats' milk, struck 660 inhabitants in a small village in Slovakia.

Well, the Ministry of Health immediately mobilized a multidisciplinary team of virologists, neurologists, pediatricians, and other scientists. The result is that this study, which just came out and which appears in a French neurological journal, I think, is the most well-rounded study of encephalitis that I have seen.

Senator PASTORE. Where was that?

Dr. BAILEY. In Czechoslovakia, and it was in this small village of Rosanava that this epidemic afflicted 660 people.

Senator HILL. Well, this disease, of course, is not limited to Czechoslovakia?

Dr. BAILEY. No. It resembles somewhat the spring-summer encephalitis they have in Russia, but it is not exactly the same thing. They found it to be different. Now if they did not have that team approach they probably would have characterized it as the same thing.

Now, Mr. Chairman, do you wish me to continue?

Senator HILL. Yes, go right ahead.

PROBLEM OF STROKES

Dr. BAILEY. I think another big problem we have to attack is the problem of strokes. Ever since 1952 I have spoken about this to this committee because it is the third-ranking killer of all diseases in the United States.

In 1955, 175,000, or more, persons in the United States died of strokes. Probably over 1 million Americans today are disabled by it.

Death and disability from strokes can strike at any age, but it is more common past middle age. I know, because I had a twin brother that died of a stroke at the age of 30. Yet, in spite of the importance of strokes, there is a remarkable lack of knowledge on this subject. Research in this field has been small and scattered.

In view of the number of stroke victims, we cannot help but wonder why a more comprehensive research program has been neglected so long.

The problem of strokes concerns not only neurologists, but all clinicians and all basic scientists. Here again, there has to be, I believe, to really do something in a short time, a cooperative research attack on the problem.

In the last 3 years there have been 3 breakthroughs in this field. One is the promise of the development of an effective anticoagulant for the prevention of strokes, particularly what they call small strokes. Another is the development of an enzyme which seems to have some promise to dissolve blood clots in blood vessels when they are formed.

Also, we have the recent use of a technique for cooling the brain, which makes it possible to operate on vascular malformations of the brain which are quite common, and more common in younger people than older people.

The final development is the experimental induction of strokes in animals. This also permits the testing of methods of treatment and prevention of strokes in the laboratory which later can be tested on man.

Senator PASTORE. Who is that young doctor that made these injections? You mean you actually create a stroke in the animals?

Dr. BAILEY. Yes. They are working out methods of creating a stroke by using various chemicals in an animal which would cause either a thrombosis, formation of a clot in the brain, or even a hemorrhage, and then seeing how this can be prevented.

This work which is just beginning should be encouraged. Strokes are such devastating conditions because if you do not die, you are apt to be paralyzed, you are apt to have interference with speech and the use of language, and it is a most distressing condition.

PROMISING TREATMENTS

So we have these four new developments which show some promise; that is, anticoagulants, particularly in the prevention of small strokes; the developing of enzymes to dissolve clots that are formed in vessels of the brain; the cooling down of the brain so you can do surgical operations on vascular malformations of the brain; and finally, this experimental approach which is being started to find out in animals what causes strokes and how to prevent or treat them.

We have started two cooperative projects in this field; one has to do with anticoagulants and the other, which is a prevention, is this brain-cooling procedure for the surgery of aneurisms.

Now, an aneurism is a malformation of a blood vessel which may burst and cause a general hemorrhage in the brain or its membranes. Having an aneurism is like having a dagger over your head because you are in constant fear it will break and that you will have a fatal or incapacitating cerebral hemorrhage.

Senator PASTORE. How is the brain cooled?

Dr. BAILEY. It is cooled down by the same process of cooling down the whole body. You cannot clamp off an artery of the brain like you can ordinarily, because the blood supply of the brain requires more oxygen than do other parts of the body. Therefore, when it comes to the question of clamping down on an artery of the brain in order to establish a collateral circulation, you cannot do it for a very long time. But with this cooling down process—hypothermia, as they call it—you can cut off the blood supply about 10 times as long and this gives you a chance to actually accomplish the surgery.

We have these two cooperative projects with a uniform protocol which has been developed. For instance in six collaborating institutions we are taking one group of patients with aneurisms, and submitting them to surgery; while another similar group is given conservative treatment. The results of the two groups are then compared.

Now, I think this field, cerebrovascular disease, should be very much emphasized because of the very great disability that is connected with it. We have listed, in the highlights, many of the other recent advances made in the Institute's program.

RESEARCH IN CEREBROVASCULAR DISEASE

In addition, I have another prepared statement on research in cerebrovascular disease which goes into the subject more thoroughly than I have here. If this statement could be included in the record I think it would cover the subject more fully.

Senator HILL. That statement, too, will be made a part of the record at this point.

(The statement referred to follows:)

BACKGROUND STATEMENT ON RESERACH ON CEREBROVASCULAR DISEASE

IMPORTANCE OF THE PROBLEM

Cerebrovascular disease is a major unsolved medical problem, the third ranking killer and a foremost crippler of all diseases in the United States. In 1955, 175,120 persons in the United States died from cerebrovascular lesions. It is estimated that over 1 million Americans today are disabled because of this condition. Cerebrovascular death or disability can strike at any age but is more common past middle age. Of the cerebrovascular deaths in 1955, 39,600 were in the working-age group, 25–64 years. Yet in spite of its scope as a public health problem, there is a remarkable void in our knowledge of the subject—and what research has been done in this field has been sporadic and scattered.

MULTIDISCIPLINARY APPROACH

The attack on cerebrovascular disease concerns not only the neurologist and neurosurgeon, but also the general practitioner, the internist, the geriatrician, the physiatrist, the pediatrician, the psychiatrist—in fact, all clinicians. Also, on the basic science level, it concerns the anatomist, pathologist, physiologist, biochemist, and psychologist. To meet such a multidisciplinary challenge, both clinical and basic, a pooling of multidisciplinary effort and talent into a cooperative research attack on the problem appears to be propitious.

CEREBRAL THROMBOSIS AND HEMORRHAGE

It was early recognized that the development of a cooperative research attack would prove difficult unless some standard method of classification for cases and diagnoses could be established. Strokes, which are the most serious manifestation of cerebrovascular disease, may result from any interference with the circulation within a blood vessel of the brain. Such interference may result from occlusion of a blood vessel by arteriosclerosis, by plugging of the vessel by a

circulating blood clot, or by rupture of the vessel wall as a result of malformation or disease.

The neurologist who is called upon to diagnose and treat the patient who has experienced such a catastrophe may find it difficult to be certain which of these processes is responsible, or to detail the specific blood vessel in which the damage has occurred. However, if treatment methods are to be accurately evaluated, an accurate method of describing and categorizing all patients suffering with these diseases was required.

ADVISORY GROUPS

In June 1955, the National Advisory Neurological Diseases and Blindness Council, appointed a committee under the chairmanship of Dr. Clark H. Millikan of the Mayo Clinic to attack this problem. This committee has just completed a manual for classification of cerebral vascular disease.

PROGRESS ACHIEVED

The availability of this standard classification has made possible the implementation of a cooperative study of cerebral vascular diseases. The purpose of this project is to provide a basis for the evaluation of therapy of cerebral vascular disease. Within the cooperating institutions, standard methods of case selection and classification are being followed. A large group of cases are available for study, and relatively rapid evaluation of new forms of therapy is possible. This group is now concerned specifically with the evaluation of the effectiveness of anticoagulant drugs in preventing strokes due to arterioscelerosis. This form of therapy has appeared to be especially promising in relation to "slow strokes" which I mentioned last year. Seven research teams are now participating in this project, and it is anticipated that others will be added during 1958.

CEREBRAL ANEURYSMS

Cerebral aneurysm represents a special cause of strokes often occurring in young people, and amenable to surgical therapy. Aneurysm results from a weakness of the blood vessel wall. A balloon-like sac forms on the vessel and when this ruptures, hemorrhage into the brain results. Recent advances in neurosurgical technique and especially the use of body cooling in anesthesia have made it possible to cure many cases of aneurysm before fatal brain hemorrhage has occurred. The mortality rate, which for many years has remained at 50 percent, has as a result, dropped below the 30 percent mark in some series of cases. Again, a cooperative investigation, involving the study of a large number of cases, was required to make possible the prompt evaluation of various forms of neurological and neurosurgical approaches for aneurysms in various locations within and around the brain. Last year, 10 institutions were involved. This year, we are pleased to report that 18 research teams are cooperating in this endeavor.

PROGRESS ACHIEVED

Animal experiments are also contributing to our knowledge of the processes underlying strokes in humans. Heretofore, it has been found difficult to reduplicate in young animals a standard or reproducible stroke in which the effects of treatment could be evaluated. Recently, by the use of injections of coagulant material or solid particles, such a standard stroke has been produced and the way is being cleared for far more accurate animal evaluation of therapy than has heretofore been possible.

BASIC RESEARCH

Advances in treatment can be tested, and new approaches suggested by such studies as those outlined above. However, in order to broaden their scope, we need more knowledge of the basic mechanisms of blood vessel response and of brain damage. In an important study, investigators at Harvard observing blood vessels in the surface of the brain of animals, have demonstrated that spasm of injured or irritated blood vessels may be a significant factor, not only by shutting off circulation to the brain, but also by injuring the blood vessel wall and causing blood to leak from it into the brain.

In this connection, changes in permeability of the cerebral blood vessels may play an important part in brain swelling or edema which often accompanies brain injury and leads to damaging pressure within the skull. New radioactive tracer techniques are greatly expanding our knowledge of transfer of fluids across the blood vessel wall.

PRESENT STATE OF DEVELOPMENT OF PROGRAM

The National Institute of Neurological Diseases and Blindness has used several methods for strengthening the research effort in this field. In the area of clinical research, the cooperative programs have been developed starting last year with 10 institutions supported at a level of $172,000 to 24 institutions this year supported at a level of $377,347. These programs are providing much-needed answers to specific questions, and in addition they are creating teams of alert and well-trained investigators located within our teaching institutions and drawing young capable men into the field of research.

In the area of basic research, 35 research grants, totaling $482,368 are being supported currently. The comparative figure for 1957 was $234,770. The special training programs in neurochemistry, neurophysiology, and neuropathology also are training scientists to utilize the new techniques which are applicable to this problem. The major limitation to research in this field is in trained personnel. The effectiveness of these training programs is evidenced by increases in grant support in this area from three grants totaling $71,000 in 1957 to 8 grants and $482,308 in 1958. It is probable that this marks but the beginning of the upswing of research potential in this field.

FUTURE PROGRAM

Under the guidance of the committee appointed by the National Advisory Neurological Diseases and Blindness Council, the current investigations of the etiology, diagnosis, prevention, and treatment of cerebral vascular disorders will be prosecuted vigorously. As new leads develop from these studies, new investigations may be undertaken.

The training programs in the basic neurological sciences, in clinical neurology, and the special clinical traineeships, will provide competent personnel to aid in the conduct of these investigations.

WORK ON CEREBRAL PALSY AND MENTAL RETARDATION

Dr. BAILEY. I might say a word on our collaborative project in cerebral palsy, mental retardation, and other aftermaths occurring during the birth period, which we call the perinatal period, extending from conception to about 1 day after birth.

According to all the epidemiological information we were able to find, it is during this period that something goes wrong which causes cerebral palsy and mental retardation, and certain types of deafness, blindness, and epilepsy.

Senator SMITH. What period did you say that covered, just before birth?

Dr. BAILEY. No, it is the period that extends from conception to about a day after birth, which we call the perinatal period. It is not a very satisfactory word. I have asked people for a substitute but have not received any satisfactory substitute.

But, anyway, this is a vitally important period in the development of the nervous system. In research in the past, for instance, one might find a case—as I did 6 weeks ago—a case of what is known as hydrocephalus, which is an enlargement of the ventricles of the brain. The head of this patient was bigger than average and the patient was slightly defective mentally and had some neurological signs.

Now, if you would want to find out what happened to this child, you contact the mother to try to find the obstetrician who made the delivery.

Well, when you do it that way sometimes it is all you can do actually to prove the child was born. The records are not made or kept in a way that gives information that is of much use. So we decided that if we wanted to save time on this problem which is one of the biggest

in medicine, the only way would be for everybody to get together and start examining all mothers and babies from conception through birth in a collaborative project of several leading medical centers. Now we have 13 collaborating institutions, including some of the leading universities and medical schools in this country plus our own Institute, which serves as a central laboratory in integrating axis for this project.

We have worked over a year to bring to final form a scientific protocol that all the collaborating institutes can understand and follow so that all observations and data obtained will be comparable.

Then, when cases of cerebral palsy or mental retardation appear, we know exactly what happened during the perinatal period, which should eventually provide a lead for the cause, prevention, or cure.

PROBABLE CAUSATIVE FACTORS

For instance one discovery already has been made. Infections of the placenta, which is the afterbirth, have been found in about 15 percent of the births in one hospital. Now these infections on routine examinations by obstetricians were not found. They were found in this one hospital because here microscopic examinations of all placentas were made. Therefore it looks as though infections of various types will play a very important role in this problem. We know already that it does in German measles, for example.

Now German measles, particularly in the first 3 months of pregnancy, causes mental retardation and cataracts and deafness in many cases.

With a project like this, another advantage is in having the machinery to test the effects of current diseases during the perinatal period. For example when Asian flu was prevalent, we admitted to the study pregnant women who had Asian flu to determine if there is any causal connection betwen Asian flu during the perinatal period and the subsequent production of cerebral palsy and other disorders of early life. We are running parallel studies on monkeys in our colony in Puerto Rico, where we have demonstrated that by asphyxiating the brains of the offspring of pregnant monkeys, we can induce cerebral palsy and mental retardation in varying degrees.

Another important operation is that the changes we see in the brains of these young retarded monkeys are of a type which ordinarily would disappear in the course of time. If they live, say 10 years longer, examinations of their brains would not reveal any pathology. This shows that the early pathology of the infant palsied monkey tends to disappear during maturation. The same process may apply to humans. That may be why in many cases of human mental retardation and cerebral palsy evidence of brain damage is not revealed because it probably disappeared during maturation as it did in these monkeys.

Senator PASTORE. Yet the retardation lasts?

Dr. BAILEY. Yes.

Senator HILL. Are you through with that question of cerebral palsy?

Dr. BAILEY. Yes.

HOUSE REPORT

Senator HILL. I want to call attention to this statement in the House report, speaking about the various diseases you have been speaking about:

> A national program of research on this problem involving close collaborative research among 12 institutions which deliver 32,500 babies per year is now in progress.
>
> The original plan called for a program involving 46,000 deliveries per year in 15 institutions. The additional funds provided for this Institute are intended in part to enable this important research to reach the level originally planned.

Do you feel we should go to the 15 institutions to make use of those 46,000 deliveries?

Dr. BAILEY. I think certainly, if we can get the type of institutions we want. You see, these institutions that we have now are among the highest ranking in the country. Of the interested others, some would qualify and some would not.

Senator PASTORE. How long does it take in the average case? Let me put it this way because maybe I did not phrase my question correctly:

Are there instances where, after the birth, it is undiscoverable for some time, as to the condition of the child, say as to cerebral palsy?

Dr. BAILEY. Oh, yes; it might be 5 years. The child I was just talking about was 5 years old.

Senator PASTORE. Is that because of misunderstanding or ignorance on the part of the parents or is it a question that they would not have known anyway?

NEED FOR NEUROLOGICAL STUDIES OF NEWBORN

Dr. BAILEY. Well, it is ignorance on the part of the parents and on the part of the medical profession. There never has been developed a really careful study on neurological examination of the newborn, or on early infancy and childhood. That is another thing we are working on in this project, running electroencephalograms on the fetus while it is in the uterus to see if the fetus is normal before birth.

Senator PASTORE. The reason I asked the question is this: If I understand you correctly, this is more or less a reverse research, working backward; they have to discover the case first and reverse it?

Dr. BAILEY. That is what it used to be. We are starting right at the beginning with our criteria of the information we want, and expect to examine about 40,000 cases. In these 40,000 cases, our belief is that you will get enough cases of cerebral palsy and mental retardation and these other conditions to have a lead on what to pursue more specifically.

Dr. SHANNON. I think about 3 percent of our population has some degree of mental retardation. This is not an uncommon thing, so that with the large body of so-called normals at birth, there will eventually develop a very sizable percentage with varying degrees of brain damage, varying degrees of mental retardation. It would then be possible to find out what happened to these children during their life in the uterus, during their delivery, that makes them different from the others that are normal, so it is again in retrospect analyses, but a type of analysis where the information is better analyzed.

Dr. BAILEY. Yes, it is both prospective and retrospective approach.

Actually, your total number of neurological and sensory disabilities arising in the prenatal period is about 15 per thousand. Therefore, for example, if we find that so many mothers have a certain type of infection, resulting in cerebral palsy and mental retardation, then we can test these findings experimentally in our monkey project.

POSSIBILITY OF AMELIORATING CONDITION

Senator HILL. Doctor, in the case of a child, say 7 or 8 years old with cerebral palsy, is there anything you can do for that child?

Dr. BAILEY. Of course, if a child has seizures, we can treat the seizures.

Senator HILL. I understand that.

Dr. BAILEY. The only other method we have is rehabilitation of what the child has left, that is, to bring out the most we can of what he has left.

Senator HILL. You mean to make better use, greater use, of what has not been impaired?

Dr. BAILEY. That is right, and some children will improve considerably by these methods; but, of course, the eventual problem must be solved by prevention.

Senator HILL. I understand, to prevent the impairment in the first instance.

Dr. BAILEY. That is right.

Senator HILL. Outside of that, you would rehabilitate or make a better and greater use of that which is not impaired, or which is normal, so to speak.

Dr. BAILEY. Yes.

PREPARED STATEMENT

We have prepared a more detailed background statement on this subject which I could offer for the record, if the committee so desires.

Senator HILL. Let that statement become a part of the record at this point.

(The statement referred to follows:)

BACKGROUND STATEMENT ON COLLABORATIVE STUDIES IN CEREBRAL PALSY AND OTHER NEUROLOGICAL AND SENSORY DISORDERS

IMPORTANCE OF THE PROBLEM

One of the most important research areas pointed out last year was the study of the overall problem of pregnancy wastage, including miscarriage, prematurity and neonatal death as well as maldevelopment and defect of the offspring. Because of the peculiar nature of these conditions many of which have their origin long before birth, an exact knowledge of causation has been difficult to obtain. The long-term, collaborative and prospective study of the perinatal period is an important method of attacking this problem. Through this program a number of unselected women are followed carefully throughout pregnancy so that in those cases where some defect of the offspring occurs, the factors which might have been responsible will have been observed and recorded. Because of the relative infrequency of some of the conditions to be studied, a large number of cases are required, and it has been established that the efforts of at least 15 collaborating institutions will be required.

PRESENT STATE OF DEVELOPMENT OF PROGRAM

In 1957, there were 11 grants supported to the amount of $1,389,527; in 1958, there are 13, with support amounting to approximately $2 million. The institutions are: Boston Lying-In Hospital, Boston; Brown University, Providence;

Charity Hospital, New Orleans, La.; Children's Hospital, Philadelphia; Children's Hospital, San Francisco; Columbia University, New York City; Johns Hopkins University, Baltimore; Medical College of Virginia, Richmond; New York Medical College, New York; University of Minnesota, Minneapolis; University of Oregon Medical School, Portland; University of Pennsylvania, Philadelphia; and Yale University, New Haven.

ADVISORY GROUPS

The last year has been concerned primarily with the organization of the individual units, employment of the essential personnel, and the preparation of the detailed protocol of the investigations. Throughout this planning period, the program has been fortunate to have the advice of a representative advisory board under the joint chairmanship of Dr. H. Houston Merritt and Dr. Nicholson J. Eastman. The program has also been fortunate in its statistical committee, consisting of Drs. Jacob Yerushalmy, Carroll Palmer, and Joseph Hodges. This group has provided invaluable assistance in preparing the study design of the project, as well as advising on the overall protocol.

CURRENT PLANS

The program as it is now established envisages the evaluation of the genetic, familial, and constitutional background of the parents, the social and economic status, as well as their education and general level of intelligence, the emotional characteristics and climate of the mother, her physical characteristics and previous medical experience, and the complications of pregnancy, labor, and delivery. Particular attention is being placed on the detailed description of the circumstances and events of the labor and delivery.

The events noted above, and the characteristics of the family background are then to be correlated with the eventual status of the offspring. The protocol envisages that examinations will detect all cases with any clear-cut neurological defect. In addition, examinations are included which will detect the existence of any significant degree of mental subnormality, as well as any gross maldevelopments of organs of the body apart from the nervous system.

In conjunction with this program, provisions are being made for careful and detailed pathological examination of the central nervous system of all children who fail to survive during the period of the study. Plans are in progress, also, for setting up a facility to evaluate the embryology of all fetuses aborted in the collaborating institutions. The basic protocol thus provides the basis for an accurate correlation between the circumstances and events of pregnancy, and the subsequent condition of the offspring.

SPECIAL FEATURES

There are two unique features of the collaborative study. The first is its collaborative nature—it involves a close cooperation among the several institutions involved, and requires that they follow a relatively fixed basic procedure. This collaboration is not only interinstitutional, but it is also interdisciplinary. Within each institution, there are 10 to 15 different disciplines and areas of interest represented. The personnel of the study include geneticists, epidemiologists, statisticians, psychiatrists, psychologists, sociologists, obstetricians, physiologists, pediatricians, and neurologists. The program is providing a powerful influence in cutting across disciplinary boundaries and encouraging an exchange of techniques and information among these numerous groups. In order to strengthen these collaborative efforts, frequent conferences among the individuals of the collaborating institutions are being held. In some instances these are conferences of individuals with a specific area of interest. In others, there are conferences among the collaborating institutions, and involving a representative of each. In addition to exchange of information through conferences, there are provisions for exchange of personnel. In many instances, men undertaking a certain part of the study will visit other collaborating institutions for periods of days or weeks in order to observe the techniques which they worked out for dealing with certain aspects of the problem.

The second unique feature of this study is the fact that it is prospective rather than retrospective in character. All information relative to the patients under study is recorded and coded as soon as it is obtained. Although this greatly increases the complexity of the study, experience has shown that unless this is done the necessary facts are either unavailable or the data obtained are subject to serious inaccuracies.

CURRENT PROBLEMS

A troublesome problem which is inherent in the collaborative study is that of obtaining a sufficiently large sample. In spite of the vast number of cases to be studied (now estimated at approximately 40,000) the actual number of individuals suffering from some of the rare specific defects actually will be small. For example, if one calculates the incidence of gross cerebral palsy at 5 per 1,000, one finds that this study will yield only 200 such cases. The total number of damaged or defective individuals is many times this, and figures of gross maldevelopment alone may run as high as 5 or 10 percent. The problem lies in the fact that this large number of individuals represents a heterogeneous group, and a statistical study will not be significant unless each of the subgroups is dealt with individually. It is thus evident that ways must be found in which one can obtain a large sample, yet allow for meticulous examination of the cases included.

MULTIPLE APPROACHES

The basic method by which this is to be accomplished is by varying the intensity and completeness with which different groups of patients are studied. Within each institution, a certain group of patients will be subjected to a standard, complete workup. Additional patients will have more intensive investigation of certain aspects of their pregnancy, using special studies requiring skills or interests not available among all the collaborators. Other groups of patients, larger in number, may have only partial or less detailed study. This will depend upon the particular capabilities or special interests of a collaborating institution. The various studies complement each other. Thus, taking advantage of the individual capabilities of the several collaborating institutions will provide for the broadest possible coverage of the problem.

Meanwhile, in some centers, the clinical studies are being supplemented by animal investigations through which techniques of study can be developed and tested, and promising leads explored on an experimental basis.

TRAINING OF INVESTIGATORS

The impact of the collaborative study already is extending far beyond the study itself through its effect on members of the obstetrical, pediatric, neurological, and related disciplines. The study is providing a valuable stimulus toward one of the important objectives of the National Institute of Neurological Diseases and Blindness—that of focusing attention on the importance of neurological disorders in infancy and childhood, a long neglected field. This increasing awareness is shown by the increasing number of applications for traineeships in the field of pediatric neurology. At the present time, the Institute is providing specific support for three training programs in this important subspeciality of pediatrics and neurology. There are 12 trainees, and the number of requests is increasing rapidly. In a number of instances, pediatricians concerned with the collaborative study are obtaining additional training in neurology in order to equip them to specialize in this important area of their concern. The development and training of skilled personnel is the most important single stepping stone for further developments for research in the area of disorders of the nervous system.

BASIC RESEARCH

Increasing awareness of the need for more knowledge concerning the basic mechanisms of pregnancy and labor is also developing as a result of these clinical studies. Within the collaborating institutions this is manifesting itself in the form of requests for special training, and in requests for research grants.

FUTURE PROGRAM

The program to this point has been concerned primarily with the selection of capable collaborators, and the development of a sound protocol for the investigation. The program for the future envisages the implementation of the protocol, and the creation of a broad and unified collaborative effort.

REGENERATION OF CENTRAL NERVE TISSUE

Dr. BAILEY. Mr. Chairman, another aspect we are working on is the regeneration of central nerve tissue.

Now, if we can get central nervous tissue to regenerate as we can get the skin to regenerate, we might have some functional recovery in the brain and spinal cord. We have been working very intensely on that for a number of years. We have demonstrated structural regeneration of the spinal cord. It can be done. We have not been able to get any significant functional restoration. That, to me, is just a question of time, and I think it is a question of a long time.

Senator HILL. A long time—meaning years?

Dr. BAILEY. Well, I do not like to say exactly.

Senator HILL. I understand.

Dr. BAILEY. If I were betting on it, I would say 10 to 15 years.

It is a most important thing and probably the first application would be in cases of paraplegics, where the spinal cord has been severed and they have a paralysis from the lesion down. That is a very serious condition because they also may lose bladder and bowel control and they lose the refined use of neuromuscular coordination. It is a very distressing thing and it is a very costly one. For the paraplegics of World War II, it will cost the Government about $400,000 a paraplegic. But where we did the first work on central nerves was in the spinal cord. I can show you some pictures of it.

Here is where the spinal cord was cut in a monkey. We enveloped the severed stumps in a plastic filter. I do not have a sample of the filter here, but here is a photograph of a severed cord enveloped in the filter like tobacco in a cigarette. Unfortunately, the photograph of the structural restoration of the spinal cord I do not have with me, but it happened. This was done experimentally and it happened. The healed spinal cord even conducted electrical stimuli from end to end, but so far we have not reached any satisfactory level of functional restoration in these animals.

Senator HILL. You mean that current goes through the lesion?

Dr. BAILEY. Permit me to explain more in detail. The spinal cord is about the thickness of a fat fountain pen. Now, suppose it is severed as shown in the photograph [indicating]. Now, what happened in untreated cords was that fibrous tissue would grow immediately and form a barrier, so the two ends of the cord could not come together. We found a method to keep that fibrous tissue out and then the fibers of the severed ends began to grow again and joined, so that we established a structural continuity.

Now if you apply an electric current at this end of the cord you can record it on the other end. That means that you have actually a structural continuity.

Senator PASTORE. In other words, you repaired the short circuit, but you cannot get the light to go on?

Dr. BAILEY. That is right; only very dimly.

Dr. VAN SLYKE. The current that he refers to going through the nerve is the current generated by the nerve itself. It isn't the current applied to the nerve.

Dr. BAILEY. Yes. In other words, we are at first base, and we have a long way to go to get to home plate.

Senator HILL. Do you have anything else, Doctor?

PROGRAMS IN AREAS OF VISION AND HEARING

Dr. BAILEY. I would like, if I may, to submit for the record statements on our programs in the very important areas of vision and hearing.

Senator HILL. You may include those statements at this point in the record.

(The statements referred to follow:)

BACKGROUND STATEMENT ON RESEARCH AND TRAINING IN VISION

IMPORTANCE OF THE PROBLEM

Although the seriousness of eye disorders is well recognized, it is necessary to call attention to the fact that 334,000 people in the United States are blind, and 1,300,000 are blind in one eye. The most common causes of blindness are glaucoma (13 percent) and cataract (23 percent). With the increasing longevity of our population, the incidence of these disorders is increasing. In addition, with the prolongation of the lives of diabetics by various new treatments, the incidence of diabetic retinopathy (7 percent) is increasing also. Other important ocular disorders are the infectious disease (11 percent), injuries and poisoning (8 percent), and vascular disorders (5 percent).

The National Institute of Neurological Diseases and Blindness, with the advent of Dr. Ludwig von Sallmann as Chief of Ophthalmology in 1955, has developed a strong, comprehensive, clinical and basic research program in disorders of vision, with major emphasis on glaucoma, cataract, and diseases of the retina. In the extramural program, a broad spectrum of research has been supported at increasingly higher levels.

The funds allocated to research in vision for fiscal years 1956, 1957, and 1958[1] were as follows:

Category	1956	1957	1958[1]
Extramural:			
Research projects	4,344,504	9,296,122	10,750,000
Vision research	955,935	1,516,722	1,750,000
Intramural:			
Research funds	3,316,239	3,829,146	4,602,500
Vision research	575,400	690,689	835,000

[1] Estimated on the basis of commitments as of Dec. 1, 1957.

ADVISORY GROUPS

Most of the applications for research grants in this field are reviewed by the Sensory Diseases Study Section of the National Institutes of Health. If important neurological, physiological, biochemical, or biophysical factors are involved, the applications may be reviewed by two or more appropriate study sections. Final action is taken by the National Advisory Neurological Diseases and Blindness Council.

Applications for training grants and traineeships are evaluated by the Ophthalmology Training Grants Committee. Again, final action is taken by the above-named Council.

A recent symposium on the electrophysiology of the visual system, conducted in connection with the meeting of the eastern section of the Association for Research in Ophthalmology, brought together the leading experts in the field from North and South America and England. This meeting provided great help and stimulation to the intramural group of research workers and the publication of the papers and discussions will guide and stimulate research in the entire field. This exchange of scientific information has been found to be most effective in advancing knowledge in this highly specialized field.

[1] Estimated on the basis of commitments as of December 1, 1957.

PROGRESS ACHIEVED

Research in the disorders of vision includes a very wide range of projects. These include basic studies of structure and ultrafine structure of the eye and its tissues, the physiology of vision in vertebrate and invertebrate animals, neural transmission, cortical representation, and visual perception, to name only a few. Clinical studies involve investigations of the blinding diseases, such as glaucoma, cataract, uveitis, retinopathy, and ocular tumors.

Investigations of the single sense cell, as well as biochemical studies of the light-sensitive pigments of animals, fish, and birds are providing new and important information about the basic chemical and electrophysiological processes which, when transformed into nervous impulses, result in perception of light, pattern vision, and visual responses to visual radiation.

The development of retinography, together with other diagnostic techniques, has permitted the determination of intact retinal function when corneal scars or cataracts have prevented visual observation of the light-sensitive portion of the eye.

Investigations of the elasticity of the eye have uncovered new leads into the mechanism of inflow and outflow of fluids in the eye, which is important in understanding glaucoma. New devices, not previously reported, for measuring intraocular pressure over periods of time and under the influence of various drugs is improving clinical studies on glaucoma patients.

The discovery of a central nervous regulating mechanism of intraocular pressure is of great clinical interest and importance because it demonstrates the importance of systemic factors in the onset and control of this disease.

Joint research with the National Cancer Institute has produced pathological material for the study of retinopathy in patients with sickle cell disease. The pathology of sickle cell retinopathy was described for the first time.

Systematic studies of cataract produced by chemical or radiological agents have produced new knowledge of their formation. The use of the electron microscope with these tissues is revealing the ultrafine structure of the lens and other parts of the eye. Biochemical studies of these tissues also are providing information on their growth and development.

Exceptional success has been achieved in the diagnosis and treatment of disorders of the eye resulting from the invasion of viruses and parasites. In addition, the relationship of these inflammatory conditions to glandular function has been revealed.

The use of radioactive tracer materials is providing valuable clinical guidance in the detection and localization of tumors of the eye and the orbit.

The onset of systemic diseases may be revealed by careful study of inflammatory eye disorders 1 to 4 years before the general symptoms develop.

CURRENT PROBLEMS

Although training programs in ophthalmology were initiated several years ago, there is still an acute shortage of personnel competent to fill academic and research positions in the field. The need is particularly great in basic research.

Studies of viral and parasitic infections of the eye have been handicapped because a section chief for microbiology has not been appointed. The cooperation of the National Institute of Allergy and Infectious Diseases, however, has made important progress possible.

The lack of appropriate radioisotopes, which are superior to radiophosphorus and applicable to the human eye, has delayed somewhat the progress in tumor detection and location.

PRESENT STATE OF DEVELOPMENT OF PROGRAM

The tabular material presented in the early part of this report reveals a rapid growth of ophthalmological research, both in the intramural and extramural programs, during the past 3 years. Part of this growth is directly related to the training programs in the fields which are producing more well-trained basic and clinical research workers.

It should be noted here that a significant portion of the large, collaborative investigation of perinatal factors in cerebral palsy, mental retardation, etc., deals with congenital blindness and other anomalies of the eyes.

The staffing and equipping of the intramural research program is nearing completion. The use of visiting scientists in specific areas has been especially help-

ful in the interim, both in promoting the research and in providing stimulation to the other scientists in the program.

The program of training of ophthalmologists for careers as teachers and investigators has developed slowly. At present 34 graduate training grants are being supported in the amount of $822,481. Under these grants 238 ophthalmologists are receiving training which they will complete at the rate of 75 per year.

In addition, the special traineeship program initiated in 1957 provided postgraduate training for 16 ophthalmologists at a cost of $89,487.

FUTURE PROGRAMS

It is anticipated that the number and quality of applications for grants to conduct research in vision will increase in the extramural program. Stimulation and guidance will be provided by the appropriate study sections and the National Advisory Neurological Diseases and Blindness Council.

The training grant committee in ophthalmology will continue to foster a strong graduate medical training program in this field.

The intramural program of research will expand slowly as the appropriate scientists are recruited to complete the planned staffing of the various sections.

Background Statement on Research and Training in Hearing

IMPORTANCE OF THE PROBLEM

Today there are an estimated 15 million people in the U. S. with some kind of hearing defect. Approximately 4,500,00 of these are seriously handicapped by deafness, and about 760,000 are totally deaf. Because there are so many people who are handicapped by these disorders, the major research effort has been directed toward the reduction of the hearing loss by hearing aids, early and better diagnosis of the patient's condition, screening techniques, devices for measuring hearing loss, and rehabilitation.

This Institute has sponsored two conferences with the leaders in the field to determine the present state of knowledge and to specify the "gap" areas where research is needed. In addition, through a research grant awarded to the American Academy of Ophthalmology and Otolaryngology, it has initiated a nationwide program to study the problems relating to conservation of hearing in children.

The funds allocated to research in hearing and disorders of speech for fiscal years 1956, 1957, and 1958 were as follows:

Category	1956	1957	1958 [1]
Extramural:			
Research projects	4,344,504	9,296,122	10,750,000
Hearing research	184,830	599,642	750,000
Intramural:			
Research funds	3,316,239	3,829,146	4,602,500
Hearing research	72,400	76,209	100,000

[1] Estimated on the basis of commitments as of Dec. 1, 1957.

It will be noted that the intramural research program is small, almost a token amount. All of the research in hearing is basic neuroanatomy and neurophysiology. Space limitations prevent the expansion of this basic program and the initiation of a clinical research program.

ADVISORY GROUPS

Applications for research grants are evaluated by the Sensory Diseases Study Section of the National Institutes of Health, primarily. If extensive neurological aspects are involved, these applications may be evaluated, also, by the Neurology Study Section or other appropriate study sections. Actions of study sections are reviewed by the National Advisory Neurological Diseases and Blindness Council thrice yearly.

Applications for training grants and traineeships are evaluated by the Otolaryngological Training Grants Committee. The recommendations of this committee are reviewed, also, by the above-named council.

From time to time ad hoc groups of leading scientists in the field are consulted.

PROGRESS ACHIEVED

Since 1954 the National Institute of Neurological Diseases and Blindness has sponsored an expanding program of research in disorders of speech and hearing and in training at the postgraduate level in the field of otolaryngology.

In research, the scope of the program ranges from very basic studies of the sense organ of hearing and the physiology of transmission of nerve impulses to clinical studies of specific disorders and the effects of aging upon the auditory process.

The anatomy and function of the middle ear are being investigated, both in the laboratory and in the clinic, in order to improve the diagnosis of, and surgery for, middle ear deafness. Studies of the inner ear, including the sense organ and the nerve tracts are important for the understanding of congenital disorders of hearing and nerve deafness. These include electrophysiological studies of the translation of sound waves into nerve impulses, and the conduction of the impulses to the auditory cortex in the brain. The distribution of nervous impulses from the ear within the auditory cortex of the brain provides information on the so-called central hearing loss, which is often associated with congenital malformations, cerebral palsy, blood incompatibilities between mother and infant, and with diabetes. Measurements of hearing loss have been improved by new instrumentation and techniques. In addition, better methods of measuring the hearing capacity of infants and small children as well as for detecting malingering have been developed.

In the field of speech, both basic and clinical studies of the speech mechanism and the nervous control of speech are leading to better understanding of normal and pathological speech performance.

CURRENT PROBLEMS

At present, there is a great shortage of research and teaching personnel able to cope with new problems and with the training of clinical and research workers in the field.

As mentioned above, in order to determine the present state of knowledge in research in audiology and speech correction, and to consider new leads and different approaches to the problems in these two fields, a conference was held in November 1957. Leading scientists, conducting both clinical and basic research in speech and hearing, delineated the "gap" areas and made recommendations for future research.

The recommendations of the consultants included the following:

1. A survey of the entire country, using appropriate sampling techniques, in order to determine the incidence, prevalence, and severity of deafness and hearing losses of different types.
2. Basic research on the neurophysiology, neuroanatomy, and ultra fine structure of the sense organ.
3. Animal studies on the effects of surgical or traumatic lesions, in the sense organ, the auditory nerve tracts, and the brain.
4. Studies of the process of aging on the development of deafness.
5. Investigation of the etiology, pathology, and treatment of diseases of the ear which may result in deafness.
6. Evaluation of surgical procedures for the partial restoration of hearing, including better methods of selecting patients whose condition is appropriate for surgical intervention.
7. Exploitation of new physical and engineering techniques for studying the ultrafine structure and the physiological functions of the ear, for improving the measurement of hearing loss, and for improving hearing aids.
8. Research on the functional aspects of hearing loss or dysfunction, including aphasia, psychogenic deafness, malingering, aphasia and psychiatric factors producing or resulting from disorders of communication.

PRESENT STATE OF DEVELOPMENT OF PROGRAM

In the research grant program, as indicated in the tabular material presented earlier, there is a strong, steady growth. Because of renewed interest in problems of speech, applications for grants to study these defects are beginning to be received. It is important to note that a significant portion of the basic collaborative research studies on cerebral palsy, mental retardation, etc., deals with the problems of speech and hearing in children so afflicted.

The training program at the postgraduate level has expanded steadily in the clinical field of otolaryngology since 1957 when 3 grants were awarded in the amount of $57,000. In fiscal year 1958, 12 training grants in otolaryngology will be supported at a total of $204,750. In fiscal year 1957, only 4 special traineeship awards were made by the Institute; in 1958 approximately 12 will be made. Postdoctoral trainees not receiving direct awards, but who were supported under programs supported by training program grants, totaled 44 in 1957, and will be approximately 115 in 1958. Expansion of this training program will be slow because of the acute shortage of qualified teaching personnel.

In the intramural research program, staffing is completed in accordance with space limitations. Basic research on the nervous pathways and connections of the auditory tracts is continuing.

FUTURE PROGRAM

Under the guidance of specialists in the field, and the specific reviews of research grant applications by the appropriate Study Section of the National Institutes of Health, a slow but healthy growth of research in hearing and speech will be fostered.

The training grant committee in otolaryngology is developing a strong graduate medical training program. This program will continue to expand slowly, depending upon the availability of teachers in this highly specialized field.

The intramural research program will continue at the present level.

AMOUNT FOR CONTINUATION GRANTS

Senator HILL. Doctor, what amount is required for continuation grants in fiscal 1959, that have already been recommended?

Dr. BAILEY. In fiscal 1959 the figure is $9,027,108.

Senator HILL. That is for your continuation grants?

Dr. BAILEY. For continuation grants in fiscal 1959, which have already been recommended.

Senator HILL. How much more is required for continuation grants anticipated for which there are presently no commitments?

Dr. BAILEY. A total of $550,000.

Senator HILL. Now, are there grant applications recommended for approval this year, which you have not been able to meet because of insufficient funds?

Dr. BAILEY. Yes, sir. There are 82 right now, involving $1,040,000.

Senator HILL. That you have not been able to meet up to now because you did not have the $1,040,000?

Dr. BAILEY. Yes, sir.

ANTICIPATED NEW GRANTS

Senator HILL. Based on your experience, how many new projects do you anticipate will be recommended for approval in 1959, and what funds will be required to activate these projects?

Dr. BAILEY. I should say between 250 and 270 with a required amount of $3,450,000.

Senator HILL. Now, what amount of funds will be required to pay all approved and anticipated approvals of your grant projects in 1959?

Dr. BAILEY. 1959, all approved?

Senator HILL. Yes, and anticipated approvals—those you anticipate.

Dr. BAILEY. $14,058,000, allowing 15 percent for indirect costs.

Senator HILL. Do you have any questions, Senator Pastore?

Senator PASTORE. No.

Senator HILL. Senator Smith?

Senator SMITH. No questions.

Senator HILL. Well, Doctor, we certainly are very much obliged to you, sir. That was a splendid statement. I know, Senator Smith, you were busily engaged in another committee and I want to call your particular attention to the fact that if you will read the opening statement, or opening testimony, which dealt with a new machine that they have developed for the location of tumors of the brain, that it certainly seems to be a very definite advance for the location of tumors, and you, I am sure, would be interested.

Senator SMITH. Thank you so much, Mr. Chairman. I am sorry I was late.

Senator HILL. We understand that you had to be in another committee, and we all have this problem of trying to be at 2 places at 1 time.

Senator SMITH. Except, this is a most fascinating subject.

Senator HILL. Doctor, we are certainly very much obliged to you. Thank you very much.

Dr. BAILEY. Thank you very much.

GRANTS FOR CONSTRUCTION OF HEALTH RESEARCH FACILITIES

STATEMENT OF DR. JAMES A. SHANNON, DIRECTOR, NATIONAL INSTITUTES OF HEALTH; ACCOMPANIED BY DR. C. J. VAN SLYKE, ASSOCIATE DIRECTOR, NATIONAL INSTITUTES OF HEALTH, AND JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

"Grants for Construction of Health Research Facilities

"[Grants for construction of health research facilities:] For grants pursuant to the Health Research Facilities Act of 1956, $30,000,000."

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate	$30,000,000	$30,000,000	$30,000,000
Unobligated balance brought forward	95		
Total obligations	30,000,095	30,000,000	30,000,000

Obligations by activities

	1958 appropriation	1959 budget estimate	1959 House allowance
Grants for construction and equipment	$30,000,095	$30,000,000	$30,000,000

Obligations by objects

	1958 appropriation	1959 budget estimate	1959 House allowance
11 Grants, subsidies, and contributions	$30,000,095	$30,000,000	$30,000,000

PREPARED STATEMENT

Senator HILL. Now, Dr. Shannon, are you ready to discuss the item of "Grants for construction of health research facilities"?

Dr. SHANNON. Yes, sir.

This is a short opening statement which describes the activities for the past 2 years, more particularly our present position, and this is something which Dr. Van Slyke has had responsibility for during its development, and, if you care to, we could have him comment on some of the aspects of this program.

Senator HILL. All right, Dr. Shannon; we will put your statement in the record in full and we will be glad to have any comments from Dr. Van Slyke that he would like to make.

(The statement referred to follows:)

STATEMENT BY DIRECTOR, NATIONAL INSTITUTES OF HEALTH

Mr. Chairman, members of the committee, Public Health Service grants for construction of health research facilities were authorized by thhe Health Research Facilities Act of 1956 (title VII of the Public Health Service Act, as amended by Public Law 835, 84th Cong.). It provided for health research facilities construction grants "to non-Federal public and nonprofit institutions for the constructing and equipping of facilities for research in the sciences related to health—medicine, osteopathy, dentistry, public health, and fundamental and applied sciences when related thereto."

The basic legislation authorizes appropriations of $30 million in each of the 3 years 1957, 1958, and 1959. Appropriations of the $30 million were made by Congress for both 1957 and 1958. The $30 million requested for 1959 would utilize the full authorization provided.

The National Advisory Council on Health Research Facilities, required by the legislation, advises the Surgeon General on all policy matters and on all applications for health research facilities grants. This Council consists of the Surgeon General of the Public Health Service as Chairman, 1 ex officio member from the National Science Foundation, and 12 appointive members. The Surgeon General may make a grant only if the Council has recommended approval and the institution has agreed at least to match the funds to be provided by the Public Health Service.

The first annual report was submitted on January 15, 1957, to the President, who submitted it to the Congress on February 6, 1957. The report was referred to the House Committee on Interstate and Foreign Commerce and was printed as House Document No. 21, 85th Congress. The second annual report was transmitted to the Congress, by the President, on February 4, 1958. It was referred to the House Committee on Interstate and Foreign Commerce and was printed as House Document No. 324. These two reports provide documentation on (1) the general purposes of the program; (2) accomplishments to date, including number of applications reviewed, number of applications recommended for approval, and amount of funds paid; (3) general comments as to impact of the program on the country; and (4) the estimate of additional future needs. This opening statement incorporates some of the material in these two annual reports and provides additional comment.

PROGRESS REPORT ON GRANTS AWARDED

Two hundred and fifty-seven institutions throughout the country have submitted formal applications for health research facilities grants and 55 additional institutions have officially indicated their plans to submit applications prior to June 30, 1958, which is the final submission date for such applications (title VII, Public Health Service Act, as amended). More than 550 additional sets of application forms have been sent to institutions that have expressed their interest in this program. Daily evidence of such interest continues to be reflected in the many telephone calls and personal visits with staff by representatives of such institutions relative to submission of applications by June 30. The total need for Federal funds for health research facilities of the 312 institutions is $184.3 million. The requirements of the additional institutions which have requested sets of application forms cannot be realistically estimated at this time.

In accordance with the recommendations of the National Advisory Council on Health Research Facilities, which were made following project-site visits and full discussion and evaluation of the individual requests, the Surgeon General awarded, in fiscal year 1957, 109 grants to 69 institutions totaling $29,999,905. From fiscal year 1958 funds, the Council recommended and the Surgeon General approved 177 grants to 134 institutions totaling $30,000,095. Thus the total funds available for fiscal years 1957 and 1958, $60 million, have been awarded. By way of comparison, requests for support during this period exceeded $83 million.

Prior to the January meeting the Council recommended for approval $9,338,427 from the $30 million requested for fiscal year 1959. In January, the Council reviewed additional projects for payment of $14,523,239. The final decision as to the full use of fiscal year 1959 funds must, however, reflect consideration of all applications which will be received prior to June 30, 1958. It is expected that this consideration will be postponed until the fall Council meeting.

The committee will be pleased with the actual progress on construction accomplished to date through the award of these funds. Of the 109 grants made from fiscal year 1957 funds, 95 projects were supported and an additional 13 supplemental awards for equipment were provided. Of the 95 projects, 14 are completed, 24 are beyond the 75 percent stage of construction, 20 additional ones are beyond the 50 percent stage, 26 are beyond the 25 percent stage, and the remaining 11 are either under construction or will be under construction by June 1958. Of these 95 projects, 57 represent grants to medical schools, 6 to dental schools, and 1 to a school of public health; private nonprofit health research institutions received 15 grants, public research institutions received 2 grants, and 15 were awarded to colleges and universities It is too early to report on the construction progress of the projects awarded from fiscal year 1958 funds except to point out that most of them are already either under contract or in the advanced planning stages.

IMPACT OF PROGRAM AND FUTURE NEED

The effect of this program on research planning for the future has been most gratifying. Confirming evidence of the realization of the importance of this program has been reflected in the outstanding contributions of the 12 distinguished individuals from all parts of the United States who serve on the National Advisory Council on Health Research Facilities. In addition to the exhaustive deliberations and discussions in their quarterly meetings, the members of this Council have devoted a considerable portion of their time during these 20 months to visits with officials and staff of the applicant institutions. Teams of Council members, accompanied in each case by a staff assistant, have made more than 350 project-site visits. The resultant reports have proved invaluable in the Council discussions of the formal requests. The visits have also greatly assisted the administrative and teaching staffs of the applicant institutions in their understanding of the program in relation to local needs. These administrative and teaching staff people have been most cooperative and have readily provided information needed by the Council for adequate evaluation of the needs of the particular institutions in relation to those of the total country.

As fully anticipated, the awarding of the 286 grants in the amount of $60 million to date has markedly stimulated local contributions and development of construction plans. Actually, the $60 million has been awarded to projects totaling over $385 million in construction costs. The availability of the Federal funds has in numerous instances been the catalyst needed to stimulate the completion of plans for urgently needed facilities. It is known that in some cases the local money had been conditionally promised, contingent upon the securing of matching Federal or other funds.

The Council has sought, through the support recommended, to improve and expand the health research facilities of the Nation, as specified by the act. All grants have been recommended in the belief that they have reasonable assurance of doing so. In some instances, reduced amounts have been recommended in the belief that a research program more modest than that desired was all that was justified. Hospitals with records of limited research activity sometimes fell into this category. With the $90 million authorized by current legislation, the Council has felt required to use previous accomplishments and promise for the future as important criteria; and as a result it has recommended greater support to universities with graduate schools and professional schools such as medicine, dentistry, nursing, pharmacy, public health, veterinary medicine, and sanitary engineering.

Special attention of the committee is invited to the fact that the health research facilities program was not intended to provide support of educational facilities.

The Council therefore most carefully evaluated all proposals in order to eliminate any portions of the requests which represented teaching or educational functions. Quite naturally, the Council was influenced by the teaching advantages which were afforded by some of the proposed research facilities.

In the 20 months of operation to date, it has been continuously obvious that, as expected by the Congress, this program has stimulated local contributions toward the building of health research facilities which have been generally recognized as most urgently needed.

Construction Grants

Dr. Van Slyke. Thank you, Mr. Chairman. First, I would like to express my appreciation to the committee and to the Congress for making this program of "Grants for construction of research facilities" around the country possible. It has been a very, very great, valuable and worthwhile program.

We have, so far, received in congressional appropriations the first two $30 million appropriations authorized by the act. We have spent the whole $60 million.

We have pending before this committee a request for the final $30 million authorized by the act; and, against and with the hope that we get this $30 million, the National Advisory Health Research Facilities Council has made tentative commitments of approximately $24 million; so we have a balance of approximately $6 million.

Understand, sir; this is tentative. This is not in actual work as yet.

We find ourselves, however, faced with 2 or 3 very serious facts.

No. 1, as the law now stands, unless applications are received by June 30, 1958, they cannot be considered by the Council.

No. 2, we have a deficit right now in requests of $61 million.

Senator Hill. Applications, the total amount of which was requested was $61 million?

Dr. Van Slyke. That is right. That is the deficit right now. That does not begin to express the whole thing. Because in many of these applications which were recommended for approval the Council cut the funds down to the bare minimum, so that with the matching funds they could put up the building and part of the fixed equipment, but not all of the fixed equipment which they really should have.

I would say, sir; as I see the program, and I am able to recall that years ago we had a little program of about $21 million in cancer and heart combined, and there is at least $150 million or closer to $175 million needed for research grant construction funds. I do not speak, sir, to the now pending, proposal to provide grants to support construction of medical, dental, and related teaching facilities. I speak only of the need for research facilities.

Report on Grants

I would like to invite your attention, sir, to the fact that the Secretary did submit the second annual report which has been published as House Document 324. This document lists all the places that grants have been made, and it was incorporated in the House record beginning on page 734, and I think, sir, it might be of considerable importance to this committee and to the Senate.

Dr. Van Slyke. I would like to invite your attention, sir, also to the fact that as of December 31, 1957, that 14 of the 95 projects already awarded have been completed; 24 more are at or well beyond the 75

percent completion mark; and an additional 20 are at or beyond the 50 percent mark; and 26 are 25 or more percent complete, and the remaining 11 are under contract.

Now, since December 31, 1957, we have reshuffled some of these funds, taking them away from certain places and putting them in other places simply to promote the use of these funds at the earliest possible moment; so when I say we have moral commitments to some of these folks for an appropriation we do not yet have, it is very real, because they were willing to go along with us and let somebody else get the funds to get started right away.

Senator HILL. Of course, these funds are all matchable?

Dr. VAN SLYKE. Yes, sir.

Senator HILL. The institution puts up half the funds?

Dr. VAN SLYKE. That is what the law requires, but the actual fact is the institutions are putting up $2.50 to $3.50 for every Federal dollar.

Senator HILL. Do the facts in the record show that?

Dr. VAN SLYKE. Yes.

Senator HILL. In other words, we are getting $2.50 to $3.50 of institution funds for every $1 we put up of Federal funds?

Dr. VAN SLYKE. We have the carrot out in front of the rabbit, and he's really chasing it.

Senator HILL. Are there any questions, Senator Pastore?

Senator PASTORE. No.

Senator HILL. Senator Smith?

Senator SMITH. No.

NEED FOR FURTHER LEGISLATION AND FUNDS

Dr. VAN SLYKE. I would like to say—and I do not know if it is improper or out of place before the Appropriations Committee, but I certainly hope that Congress will keep in mind the need for further legislation and for further funds.

Senator HILL. Well, sir, as chairman of the Legislative Committee I can assure you we have it very, very much in mind, and we shall make every effort to extend the act. I think it would be almost tragic not to extend that act, and I will say this: that I would have thought that from the very beginning with a particular view to the statement you make here this morning of how that act has been responded to by these institutions. The law requires only an institution dollar for a Federal dollar, but it has brought forth not only the $1 from the institutions but, as you say, $2.50 to $3.50 for $1 of Federal money for these research facilities.

Dr. VAN SLYKE. It should be more, because some of these are combined facilities and the figure I gave you is the lowest.

Senator HILL. In other words, you have been very conservative in that figure?

Dr. VAN SLYKE. Yes.

Senator HILL. All right, if there are no questions, Dr. Van Slyke, we want to thank you very much.

Dr. VAN SLYKE. Thank you very much.

Retired Pay of Commissioned Officers, Public Health Service

STATEMENT OF ROY L. HARLOW, CHIEF FINANCE OFFICER, PUBLIC HEALTH SERVICE

APPROPRIATION ESTIMATE

"Retired Pay of Commissioned Officers

"[Retired pay of commissioned officers:] For retired pay of commissioned officers, as authorized by law, and payments under the Uniformed Services Contingency Option Act of 1953, such amount as may be required during the current fiscal year."

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate (indefinite)	$1,500,000	$1,600,000	$1,600,000

Obligations by activities

Description	1958 appropriation	1959 budget estimate	1959 House allowance
Retirement payments and survivors' benefits (total obligations)	$1,500,000	$1,600,000	$1,600,000

Obligations by objects

	1958 appropriation	1959 budget estimate	1959 House allowance
12 Pensions, annuities, and insurance claims	$1,500,000	$1,600,000	$1,600,000

Summary of changes

	Amount
1958 appropriation (indefinite)	$1,500,000
1959 appropriation request (indefinite)	1,600,000
Net change requested	+100,000

	1959 budget request	1959 House allowance
Increases: For program items:		
To provide for the full year of 1959 the retired payments to officers placed on the retired roll during 1958 and for the net increase of 12 officers estimated to be retired during 1959	$100,000	$100,000

Table of increase and decrease of retirements

	Fiscal year—				Estimate, fiscal year—	
	1954	1955	1956	1957	1958	1959
Retired for—						
Disability	9	9	12	5	13	9
Age	3	6	7	4	5	5
Years of service	0	4	6	2	2	6
Other	0	0	0	1	1	0
Total retirements	12	19	25	12	21	20
Dropped:						
Death	8	6	6	7	6	8
Other	5	2	2	0	0	0
Total dropped	13	8	8	7	6	8
Net increase or decrease in officers on retired roll, end of fiscal year	−1	11	17	5	15	12
Officers on retired roll, end of fiscal year	230	241	258	263	278	290

General Statement

Senator Hill. All right, Mr. Harlow, you may proceed with your first item.

Mr. Harlow. Mr. Chairman and members of the committee, this is one item on which little needs to be said. Because of the action of your committee on the 1958 appropriation act, it is now an indefinite appropriation to provide for the exact amount expended.

Expenditures are made for retired pay of commissioned officers of the service, and to survivors of officers who die while on the retired list. The amounts paid are determined by law.

On April 1958, there were 272 retired officers and 12 survivors on the rolls. We expect to add 6 more officers by July 1, 1958, and to have a net increase of 12 during the fiscal year 1959. If our estimates hold up, the total expenditures will be approximately $1,600,000.

Senator Hill. These funds are simply to meet the obligations as written into the statute for retired pay for retired officers; is that not true?

Mr. Harlow. Yes, sir.

Senator Hill. Are there any questions?

Senator Pastore. No.

Senator Smith. I have no questions.

Senator Hill. Thank you very much, Mr. Harlow.

Mr. Harlow. Thank you, sir.

Public Health Service, Salaries and Expenses

STATEMENT OF ROY L. HARLOW, CHIEF FINANCE OFFICER, ACCOMPANIED BY DR. FORREST E. LINDER, CHIEF, NATIONAL HEALTH SURVEY; DR. LEROY E. BURNEY, SURGEON GENERAL; AND JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

"Salaries and Expenses

"[Salaries and expenses:] For the divisions and offices of the Office of the Surgeon General and for miscellaneous expenses of the Public Health Service not appropriated for elsewhere, including preparing information, articles, and publications related to public health; and conducting studies and demonstrations in public health methods; [$5,100,000] *$5,325,000.*

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate (total obligations)	$5,100,000	$5,325,000	$5,260,000

Obligations by activities

Description	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
Program by activities:						
1. Public health methods and reports	110	$1,800,000	110	$1,936,000	110	$1,936,000
2. Management and central services:						
(a) Immediate office of the Surgeon General	38	347,425	38	352,925	38	352,925
(b) Division of Administrative Services	103	627,000	103	631,300	103	631,300
(c) Division of Finance	138	850,000	138	856,875	138	856,875
(d) Division of Personnel	133	984,175	133	990,300	133	990,300
(e) Public inquiries and information	22	138,400	22	139,600	22	139,600
(f) Other central services and contingent items	13	353,000	13	353,000	13	353,000
(g) Civil defense activities	0	0	10	65,000	0	0
Total obligations	557	5,100,000	567	5,325,000	557	5,260,000

Obligations by objects

	1958 appropriation	1959 budget estimate	1959 House allowance
Total number of permanent positions	557	567	557
Full-time equivalent of all other positions	4	4	4
Average number of all employees	531	544	536
Number of employees at end of year	547	557	547
01 Personal services	$3,191,700	$3,274,925	$3,218,325
02 Travel	138,800	139,300	137,300
03 Transportation of things	11,100	11,100	11,100
04 Communication services	205,200	205,200	205,200
05 Rents and utility services	2,700	2,700	2,700
06 Printing and reproduction	159,700	165,700	164,200
07 Other contractual services	1,138,200	1,260,900	1,260,700
08 Supplies and materials	40,000	41,000	40,000
09 Equipment	34,450	36,450	34,450
11 Grants, subsidies, and contributions (contribution to retirement fund)	175,500	184,475	183,375
15 Taxes and assessments	4,050	4,650	4,050
Subtotal	5,101,400	5,326,400	5,261,400
Deduct charges for quarters and subsistence	1,400	1,400	1,400
Total obligations	5,100,000	5,325,000	5,260,000

Summary of changes

	Positions	Amount
1958 actual appropriation	557	$5,100,000
Deduct nonrecurring costs		−1,500
1959 base		5,098,500
1959 appropriation request	567	5,325,000
Net change requested	+10	+226,500

	1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount
Increases:				
For mandatory items:				
Retirement contributions annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)		$6,145		$6,145
Annualization costs for 61 additional positions authorized in 1958		28,355		28,355
For program items:				
For contracted collecting and data processing services furnished by the Census Bureau and additional printing and reproduction necessary for the expansion of the national health survey		127,000		127,000
For civil defense activities	10	65,000	0	0
Total change requested	10	226,500		161,500

EFFECT OF HOUSE ACTION

Activity No. 2: Management and central services

The House effected a reduction of $65,000 and 10 positions from the proposed increase of $89,000 and 10 positions for this activity. This reduction will result in elimination of the proposed civil defense project. Proposal will be made to provide for the program by appropriation to Federal Civil Defense Administration, and in turn allocated to delegate agencies.

STATEMENT BY CHIEF FINANCE OFFICER, PUBLIC HEALTH SERVICE

Mr. Chairman and members of the committee, the appropriation "Salaries and expenses, Public Health Service" is the source from which we finance activities assigned to the Office of the Surgeon General. When allowances are made for the annualization of positions which were first authorized in the 1958 appropriation, it will enable us to carry on at the current rate in all activities except the national health survey.

NATIONAL HEALTH SURVEY

The national health survey accounts for $1,389,400 of the $1,936,000 shown in the budget for "Public Health Methods and Reports." The survey now covers annually approximately 115,000 persons in some 36,000 households scattered through every State in the Union. The continuous character of the survey permits the gradual accumulation of data sufficient to permit progressively more detailed tabulation and analysis and makes possible a rotation or change in the topics covered so as to provide data on new health needs and interests. A series of six preliminary reports are now in preparation—these reports cover the volume of medical care, volume of dental care, person-disability, acute illness, accidents, hospitalization, and chronic illnesses for July, August, and September 1957. Tabulations to be made early in fiscal 1959 covering the data collected throughout fiscal 1958 will give a wealth of information on the health in the United States that will be useful to many public and private health organizations.

To keep informed of the interests of the agencies outside the Government, an advisory committee to the Surgeon General has been formed of representatives of the fields of medicine, dentistry, and pharmacy; the drug manufacturing industry; life and health insurance companies; private health agencies; labor, industry, and market research organizations; public health professions; etc. In addition to formal consultations through these committees, a very large number of other agencies and individuals concerned with health and medical research have been consulated. The views of all these consumer groups were carefully analyzed in forming the basis for the survey.

Full advantage is being taken of the provisions in the law for utilizing the facilities of other agencies. A cooperative arrangement with the Bureau of the Census makes it unnecessary to duplicate the many expert services and facilities which that agency has. More than two-thirds of the requested appropriation is to reimburse the Census for the sample design and selection, the mapping services, the collection of data through their field organization, to processing of data, and the use of their computing equipment.

The utility and success of these flexible arrangements was evident during the recent influenza epidemic. Although not designed as a current epidemic reporting system, it was possible to reorganize the flow of data quickly and there were produced, week by week, several valuable indexes of the prevalence of upper respiratory diseases. Thus within a few months after its initiation the national health survey data became the most generally used indicator of the course of the epidemic.

In addition to the household interview program, mention should be made of the health examination survey which will begin in 1959. The household interview survey is a method of obtaining health information regarding the nature and consequences of illness from the patient's viewpoint. These data need, however, to be supplemented by precise medical data expressed in clinical terms. To meet this need the medical examination survey will be started in 1959 in which a very small but representative sample of the population will be offered a specially designed, standardized physical and clinical examination. The necessary procedural studies preliminary to this survey are now underway and actual field examinations will begin in fiscal 1959.

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A net increase of $134,900 is requested for 1959 for the following items:

Seven thousand nine hundred dollars is requested for the annualization of salaries and retirement fund contributions for staff recruited during 1958.

Printing and reproduction estimates are up $4,500 in 1959 since the first publications based on annual data will appear in that year.

One hundred twenty-two thousand five hundred dollars is related to additional funds needed for contractual work performed by the Census Bureau. The experience of 1958 was the first actual test of the field costs of interviewing. These costs have exceeded first estimates and as a consequence it was necessary to make an 8.3 percent cut in the sample size on January 1, 1958. This decrease in the already minimal sample size should be restored to assure the accuracy of the survey. Another element of the increase in Census Bureau costs arises from the fact that the heavy load of annual tabulation work occurs for the first time in the first quarter of fiscal 1959.

EFFECT OF HOUSE ACTION

The House disallowed $65,000 for "Civil Defense activities," which we are no longer requesting be included in this appropriation. It is our understanding that the Administrator of Civil Defense will request the Independent Offices Subcommittee to include funds in the Federal Civil Defense appropriation for allocation to the agencies to whom certain civil defense functions have been delegated.

NATIONAL HEALTH SURVEY

Senator HILL. All right, Mr. Harlow, you may proceed on the item of "Salaries and expenses."

Mr. HARLOW. Mr. Chairman, I have a formal opening statement, which is only 3 pages long, practically all of which is devoted to the National Health Survey; which is the only item in this appropriation that has a program increase in it.

The total budget that was submitted to Congress was $5,325,000. The House eliminated $65,000, which was requested for civil defense activities in the Office of the Surgeon General. It has been decided not to request restoration of that item, which leaves a House figure of $5,260,000, which we hope you will appropriate.

Senator HILL. The only reduction by the House then was $65,000 for civil defense activity?

Mr. HARLOW. Yes.

Senator HILL. And the civil defense activities have been stricken from the bill with the idea of a consolidated civil defense activity budget appropriation?

Mr. HARLOW. Yes, sir.

Dr. Linder, the director of the National Survey is here. Between us, we will be glad to answer any questions you have about this item, Mr. Chairman.

Senator HILL. That takes in the National Health Survey, does it not?

Mr. HARLOW. Yes, sir.

Dr. LINDER. The National Health Survey accounts for $1,389,400, an increase of $134,900.

That increase is due almost entirely to the fact that experience has shown us that the cost to the Census Bureau, which actually conducts the interviews, is more than was anticipated in our 1958 budget. It was necessary to make a reduction in the number of interviews, in order to keep within the 1958 appropriation.

Senator HILL. Now, are the funds carried in the bill sufficient to do the things you feel necessary?

Dr. LINDER. Yes, sir.

REPORTS IN PREPARATION

Senator HILL. I see in your statement that a series of six preliminary reports are now in preparation—these reports cover the volume of medical care, volume of dental care, person-disability, acute illnesses, accidents, hospitalization, and chronic illnesses for July, August, and September, 1957. Is that right?

Dr. LINDER. Yes, sir. They were the first actual publications to come out of the survey and only cover a 3-months' period.

Senator HILL. Of course, there are quite a number of others yet to come from the survey?

Dr. LINDER. Yes.

Senator HILL. And the funds carried in the bill will enable you to go forward with the survey as the Public Health Service wishes, Doctor?

Dr. BURNEY. Yes.

Senator HILL. Are there any questions, Senator Smith?

Senator SMITH. I have no questions.

Dr. BURNEY. I would like to add this: We believe this is an extremely important activity in the Service. It is the first time since 1935 that there has been any actual objective study of sickness and disability throughout the United States; and, actually, what most people are doing now is trying to extrapolate findings of 1935 and 1936 into our present situation, which cannot be done; and here we have continuous information throughout the country of sickness and disability, which not only helps us to plan our programs, but it is extremely valuable to business, industry, and insurance companies; and we have found tremendous interest in this. Some of the findings have been quite revealing, showing us how wrong we have been in trying to extrapolate the 1935–36 study into the present situation.

Senator HILL. In other words, so many substantial changes have occurred during that period of time which makes use of those old figures inadequate and unsatisfactory; is that right?

Dr. BURNEY. Yes, sir; that is correct.

Senator HILL. Have you any questions, Senator Smith?

Senator SMITH. No questions.

Senator HILL. Senator Dworshak?

Senator DWORSHAK. No questions, sir.

Senator HILL. Do you have anything else, Mr. Harlow?

Mr. HARLOW. No, sir.

METHOD OF CONDUCTING SURVEY

Senator SMITH. Mr. Chairman, I would be interested in knowing how you do a survey?

Dr. BURNEY. I could give it generally, but I think Dr. Linder can tell you better, about that.

Dr. LINDER. The household survey part of the national survey is based on an interview with a sample of householders scattered throughout every State of the Union. The Census Bureau does the administrative part of this and a good deal of the technical work for us, but the general characteristic of the sample design is that, by a successive series of steps, based on geography, we define a little spot in the country which would have about six households in it. This might be 1 street of a small-town block, or it might be a square mile

in a rural area, or it might be 1 floor of an apartment building, and these are defined in a purely arbitrary and scientific manner, mathematically worked out, so that a large number of these little pieces give you a cross-section representation of the United States with the proper proportion of urban and rural workers and nonworkers, old people, young people, different economic groups.

Each worker of the field staff of the Census Bureau, under our general specifications, interviews the people in about 600 of these little pieces scattered throughout the whole United States.

These are then accumulated by months and by quarters, and ultimately by year, and analyzed down to show the health characteristics of the people; and this assures us of a proper representation of all of the strata of the American people.

Senator SMITH. Well, with the progress in medical research, and the migration of people and the changing conditions, I do not see how you could ever use figures back in the 1930's. I would think that would be pretty much of an extravagance and I use that word "extravagance" since Dr. Shannon objects to the word "waste."

Senator HILL. Are there any questions?

Senator DWORSHAK. I have no questions.

Senator HILL. Is there any other matter, Mr. Harlow, that you want to present?

Mr. HARLOW. No, sir. Thank you very much.

Senator HILL. Thank you very much, Mr. Harlow.

OPERATIONS, NATIONAL LIBRARY OF MEDICINE

STATEMENT OF LT. COL. FRANK B. ROGERS, DIRECTOR, NATIONAL LIBRARY OF MEDICINE; ACCOMPANIED BY DR. LEROY E. BURNEY, SURGEON GENERAL; ROY L. HARLOW, CHIEF FINANCE OFFICER; AND JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

"Operations, National Library of Medicine

"[National Library of Medicine:] For expenses, not otherwise provided for, necessary to carry out the National Library of Medicine Act [(70 Stat. 960), $1,450,000] *(42 U. S. C. 275), $1,415,000."*

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate (total obligations)	$1,450,000	$1,415,000	$1,415,000

Obligations by activities

Description	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
Library operations	225	$1,450,000	224	$1,415,000	224	$1,415,000

Obligations by objects

	1958 appropriation	1959 budget estimate	1959 House allowance
Total number of permanent positions	225	224	224
Full-time equivalent of all other positions	1	1	1
Average number of all employees	218	217	217
Number of employees at end of year	222	221	221
01 Personal services	$1,070,000	$1,057,600	$1,057,600
02 Travel	9,800	9,800	9,800
03 Transportation of things	400	400	400
04 Communication services	11,100	11,100	11,100
05 Rents and utility services	23,000	23,000	23,000
06 Printing and reproduction	111,000	91,000	91,000
07 Other contractual services	18,100	18,100	18,100
08 Supplies and materials	49,500	49,500	49,500
09 Equipment	98,800	94,200	94,200
11 Contribution to retirement fund	56,300	58,300	58,300
15 Taxes and assessments	2,000	2,000	2,000
Total obligations	1,450,000	1,415,000	1,415,000

Summary of changes

	Positions	Amount
1958 actual appropriation	225	$1,450,000
1959 appropriation request	224	1,415,000
Net change requested	−1	−35,000

	1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount
Decreases:				
Personal services (1 position, $10,320; reduced overtime and holiday pay and employment within existing positions, $2,080)	−1	−$12,400	−1	−$12,400
Other objects (reduction in printing and equipment		−24,600		−24,600
Subtotal	−1	−37,000	−1	−37,000
Increases: Retirement contributions annualization		+2,000		+2,000
Total change requested	−1	−35,000	−1	−35,000

PREPARED STATEMENT

Senator HILL. Colonel Rogers, we will get started with you. Do you have a prepared statement?

Colonel ROGERS. I have submitted it for the record.

Senator HILL. All right. It will be put into the record at this point.

(The statement referred to follows:)

STATEMENT BY DIRECTOR, NATIONAL LIBRARY OF MEDICINE

Mr. Chairman and members of the committee, the National Library of Medicine has operated under the Public Health Service since October 1, 1956, when, by authority of Public Law 941, 84th Congress (70 Stat. 960), personnel, equipment, collections, records, and funds of the old Armed Forces Medical Library were transferred to the jurisdiction of the new parent agency.

HOLDINGS

The National Library of Medicine has the greatest collection of medical literature in the world. Its holdings exceed 1 million items (books, periodicals, and other library materials) and have been gathered together from every country on the globe. Suitable guides to the literature are published in the form of catalogs, indexes, and bibliographies, and the vast resources of the library are made available nationwide.

MAJOR BIBLIOGRAPHIC AIDS

Major bibliographic tools prepared by the library during the past year include the Bibliography of Medical Reviews, listing 1,800 review articles; the National Library of Medicine Catalog, listing 32,500 author and subject entries for monographs; the Current List of Medical Literature, a monthly publication which listed 111,317 items from 1,547 journal titles in fiscal year 1957; and an extensive bibliography on psychopharmacological agents, now in press.

ACQUISITION OF FOREIGN LANGUAGE MATERIALS

It may be of interest to report that of the foreign language journal articles indexed last year in the Current List of Medical Literature, 11,000 were from 156 Russian and other east European publications. Since December 1955 the library has managed to increase its procurement of Soviet medical literature; acquisition of Soviet material has been facilitated by the resumption of exchange relationship with the State Central Medical Library of Moscow, and existing agreements with Soviet-bloc countries have been enlarged to include additional institutions, notably in Czechoslovakia, Poland, and Bulgaria. The library has prepared and scheduled for early publication a Russian-English medical dictionary designed to assist researchers in their review of Russian-language articles; this dictionary is the only one of its kind, and fills a long-felt need. To cope with the increased volume of Russian materials coming into the collection, members of the library staff are being trained in the language. In the past the library has participated in the only government-to-government exchange of medical motion pictures with the U. S. S. R., and plans are now underway to activate another such exchange program.

BOARD OF REGENTS

Following the President's appointment of members of the Board of Regents of the National Library of Medicine in February 1957, the Board held its first meeting on March 20, 1957; at its second meeting, on April 29, the Board decided that the site for the new library building will be on the grounds of the National Institutes of Health. At subsequent meetings the Board approved changes in the library's photoduplication and interlibrary loan policies, and in the distribution patterns for its publications.

NEW BUILDING PROGRAM

Concurrent with Board action on a site for the new building, planning funds were made available to the Public Buildings Service of the General Services Administration and a contract was negotiated with the firm of R. B. O'Connor & W. H. Kilham, Jr., of New York City, for design of the building and preparation of working drawings and specifications. Building plans reviewed by the Board of Regents on December 9, 1957, and submitted to the Public Buildings Service on December 31, 1957, have been brought through the end of the diagrammatic stage, indicating the functional relationships of the various program elements. At present the architects are working toward final plans and specifications. The plan calls for a 5-level building with 3 levels below grade devoted largely to stack space. The main floor will contain, in addition to program elements, all areas of interest to the public who come to the library. Administrative offices will be located on the second floor, together with the indexing operation.

Floor areas measure 275 by 190 feet except for the second floor, above grade. Overall, the building will have approximately 230,000 square feet of space and will provide sufficient stack area to house a collection twice the size of our present holdings. The new library will replace the present overcrowded and outmoded building which was constructed in 1887.

1959 BUDGET ESTIMATE

The budget estimate of $1,415,000 will provide for continuation of operations at the 1958 level except for some adjustments in personal services, printing, and equipment.

BUILDING PROGRAM

Senator HILL. What we would like to know is how your new building, for which Congress has authorized funds for planning, is coming along?

Colonel ROGERS. Well, sir, the diagrammatic stage of the plans has been completed, and the architects are hard at work on the plans right now and we expect that the final plans will be ready sometime late this fall.

Senator HILL. Late this fall. If I remember correctly, you testified last year that the final plans would be ready early this spring. Why all of this 9 or 10 months' delay?

Colonel ROGERS. Well, sir, I believe I did say that the final plans would be ready this spring. I thought they would be. There have been a number of delays along the line and we are about 8 or 9 months behind the schedule that I had predicted a year ago.

Senator SMITH. What has caused the delay?

Colonel ROGERS. Well, there have been several factors. One of the problems was the establishment of the site of the library. The law, as passed, gave the Board of Regents of the National Library of Medicine the power to select the site and they made this selection at their second meeting, which was in April of last year.

The Bureau of the Budget raised some objections to this site, however, and it was not until August of last year that we were able to clear the site with the Bureau of the Budget and instruct the architects to go ahead with the plans.

The architects had to know what the site was before they logically could plan the building, and there was a delay of several months involved there.

Senator HILL. You mean with the Bureau of the Budget?

Colonel ROGERS. Yes, sir.

Senator SMITH. What was their objection? What was their questioning on the site? Was it the immediate location or area?

Colonel ROGERS. The immediate location was their objection. The site selected by the Board of Regents for the location of the library is the area in the southeast corner of the NIH reservation, that is the corner right on Wisconsin Avenue just as you approach the reservation. The Bureau of the Budget felt that the building should be constructed somewhat to the north of that location. But, in August, as I say, when Secretary Folsom wrote that we needed a decision, and that we must tell the architects so they could go ahead with their plans, he told them he proposed to instruct the architects to go ahead with the site that the Regents had selected.

The Bureau interposed no further objections at that time, and the architects were so instructed.

Senator HILL. But you had all of that delay, then.

Colonel ROGERS. Yes, sir; there were several months involved in there, when the delay occurred.

Senator HILL. Well, it is 2 years ago this summer that we appropriated $350,000 for planning a new building for the library.

Colonel ROGERS. Yes, sir.

Senator HILL. You had that money for planning 2 years ago.

Colonel ROGERS. Yes, Senator.

CONTINUATION OF FUND

Senator SMITH. Does that money go from year to year?

Senator HILL. Yes, it can go from year to year. Planning money can go from year to year. We do not have to reappropriate it, but our problem has been that although we have appropriated the money and it has been available all the time, we have not yet obtained the plans.

Colonel ROGERS. Mr. Chairman, there was some difficulty about how long that money could be used, through some quirk of language that I do not quite understand.

Senator SMITH. You mean the planning money?

Colonel ROGERS. Yes, the planning money.

I did not understand the matter, except for its effect. We found that money was not available after the end of the last fiscal year, and, if you remember, this committee added language under the general provisions of last year's appropriation act in order to take care of this situation.

Senator HILL. In other words, there has been no delay because you have not had the money?

Colonel ROGERS. That is correct.

Senator HILL. That is what I want to make clear. That has been continued right on through, so there has been no period of time, not even one hour period, when you had to stop because you did not have the money, because we continued the money right on through.

Mr. KELLY. That is correct, Mr. Chairman?

Senator HILL. Yes. All of this delay has been brought about by something other than any lack of funds. The money has been available every minute of the time from the time we first put this appropriation in the bill, and the bill passed some 2 years ago; is that not true?

Colonel ROGERS. Yes, sir. The bill was passed and enacted in August 1956.

Senator HILL. Yes. It has been available then every minute of the time from August 1956 and here we are nearly 2 years later, and all that we have is the diagrammatic plans.

And you say it will be when, late fall, did you say?

Colonel ROGERS. Yes, sir.

Senator HILL. It will be late fall before you can really have your plans?

Colonel ROGERS. Yes, sir.

REASONS FOR DELAY ON BUILDING

Senator HILL. That will be well over the 2-year period, 2 years that you have had the planning money.

Colonel ROGERS. Yes, sir.

Senator SMITH. Then how long does it take to get your contracts awarded?

Colonel ROGERS. After the final plans are in hand, and let's say the final plans would be in hand in December, it would be some time

in January before the bids could be let out—that is not the right word—before the bids could be sent out. It would be March before the contractor could be chosen and the bids actually let for the construction.

Senator SMITH. So it would be another year, anyway, before you could even begin on the construction?

Senator HILL. And that also means we have to appropriate the money for the construction, too, Senator.

Senator SMITH. Yes.

Senator HILL. Well, there has been mighty little progress up to date. In fact, you could not call this progress.

Colonel ROGERS. I am afraid not, sir.

Senator HILL. Certainly, what has happened up to date is not in any way consistent with what the Congress had in mind, the intent of Congress in passing the National Library of Medicine Act.

One of the things we hoped for in creating the National Library of Medicine out of the old Armed Forces Medical Library was that the Public Health Service would get behind the library and push it with a vigor that the Department of Defense never seemed to muster.

I might say that I was reminded of this situation the other day when I expressed regret over the death of our old friend, Col. Harold Wellington Jones, who was Director of your library 20 years ago.

I remember very well when I was a member of the Senate Committee on Military Affairs that we heard testimony from Colonel Jones, General Reynolds of the Army, Dr. Parran, Surgeon General of the Public Health Service, and many others, concerning the need for constructing a new building for the Army Medical Library—that was back in 1938, and Congress, at that time, which was the 75th Congress, passed Public Law 611, authorizing construction of the new building for this library. The building then was badly needed, and although we passed that act, nothing happened.

Now I had hoped that after 20 years, when we put these planning funds in the bill 2 years ago, that we could then certainly expect expeditious action.

Now, if we judge the future by the past, it would seem to me that another 20 years will pass before we will have any real progress.

NEED FOR BUILDING

Now, what we want is progress. Colonel, we want you to tell us now, frankly and fully, and freely; just what the need is for this building?

Colonel ROGERS. Well, Mr. Chairman, we really need this new building, and we have needed it for a long time. We have needed it for longer than the 20 years that have gone by since the 75th Congress authorized the construction of a new building.

I have here somewhere a copy of a letter which Colonel McCaw wrote to the Surgeon General of the Army, in 1910. Colonel McCaw at that time was director of the library, and Colonel McCaw said to the Surgeon General:

> The roof is leaky and the original roof drains have proved a constant source of vexation. Every year the inner walls have been flooded at some place or another, ruining the walls, and threatening books and pictures.

That has been happening every year since 1910; it happened this year.

This year we have had a series of small disasters; first of all, defective plumbing caused a backup of water and overflow into our stacks last fall and we lost a few books of the early 19th century through the flooding of the basement area.

Senator HILL. You mean books over 150 years old?

Colonel ROGERS. Yes, sir. They were things like the treatise of Abraham Colles on fractures. Books of that nature were lost.

A couple of months ago we noticed that another basement floor area in the building was sagging. We could see, by a benchmark on the wall, that the floor had sunk about an inch and a half. We pulled up some of the old flooring to investigate, and we found water standing under this area to the depth of about 2 feet.

We carted out all of the books, stacked them in the corridors, and tore up this entire area. The beams supporting that floor had apparently originally been about 2 by 10's, and most of them had been eaten down to where they were less than 2 by 4's in size at the present time; so we had to take out all of that flooring, pump out the water, find its source, carry a lot of rubble in to fill the area, pour cement, and the cement is curing right now before we can put our stacks back onto it.

RENTED SPACE IN CLEVELAND

With all of these difficulties, Mr. Chairman, the collection of the library keeps growing. It has grown every year. In 1942, for example, we had the situation where the oldest and rarest volumes in the library, those volumes printed before 1800, were removed to rented quarters in Cleveland, Ohio. The physicians of Cleveland made available to us a portion of their library in Cleveland in which we might house these books.

Now, in the interval of 16 years that these books have been in Cleveland, the Cleveland Medical Library has also grown. It has come to a stage where the Cleveland people are scarcely able any more to make available to us space beyond their own needs. When we renegotiated our lease in 1955 for a period of 5 years, we had to accept a drastically reduced space area in the Cleveland Medical Library. I do not like to contemplate what will happen in 1960 when I have to go back to renegotiate that lease when their own needs will have grown during the past 5 years.

Senator HILL. In other words, in addition to not having any more space for the Government, they just barely have enough space for themselves?

Colonel ROGERS. That is right.

In 1955, Mr. Chairman, we had 2 entire stack levels in the Cleveland Medical Library, plus office space that we used out there.

Because of their own needs we had to reduce that space in 1955 to 1 stack level. That is all we have left out there. We have our books jammed in and that lease expires in 1960.

Senator HILL. I have been down to this building. I have seen it. You have books jammed in the basement corridors; have you not?

Colonel ROGERS. Sir, we have had to stack the basement corridors; we have stacked the rooms that were previously used as coal bins. We have had to add an extra shelf on top of our stacks and provide stools so that our people can get to the books. Our people themselves have oozed out into the corridors to get space to work in. Our

catalogs are all located in the corridors of the building, because that is the only place they can be put.

INADEQUATE AND INEFFICIENT OPERATION

Senator HILL. Well, with crowding and jamming like that, that makes for an uneconomical and inefficient and inadequate operation, and have you not also a terrible fire and water hazard there?

Colonel ROGERS. It is a very inefficient arrangement. First of all, it is inefficient to have part of your library in Cleveland and part of it in Washington. With the best will in the world between my chiefs in Cleveland and here in Washington, this still is just not an efficient operation. Secondly, in our present building we have had to put books all over the building, in areas that were never designed as stack space for books, and we lose control over the collection in this way. There are entrances and exits all over the building to the stack areas, instead of having a controlled area, over which we can keep surveillance.

Senator HILL. Now, what about your water and fire hazards?

WATER AND FIRE HAZARDS

Colonel ROGERS The water hazard is tremendous. The condition described by Colonel McCaw is still there in large part. The walls still have interior downspouts that leak through the walls of the building constantly. The plumbing is in terrible shape. We found, for example, that the water standing under the basement area was due to defective plumbing from a sink up in our binding section. It had just been discharging its water into the pool under the building, rather than into a sewer drain.

As for the fire hazard, in my mind the main hazard comes from the fact that there is only one single stairway right there in the middle of the building. There is only one way to get down from any floor of that building. The wings of the building are entirely isolated. Your personnel would have to come jamming through the building and down that one single stairway. That is the most prominent fire hazard.

Senator HILL. Well, you would never get these invaluable documents out?

Colonel ROGERS. I do not think so.

Senator HILL. And if they were destroyed by water and fire they are absolutely irreplaceable, there is no way to replace them?

Colonel ROGERS. I do not think there is enough money anywhere, Senator Hill, to replace parts of that collection.

Senator HILL. It is not a question of money; the fact is, they are no longer in existence in this world, except down here in your library; is that not right?

Colonel ROGERS. That is correct.

Senator HILL. I might say a number of years ago William Osler wrote his monumental work on the Practice of Medicine and he said if it wasn't for that library he could never have written that monumental contribution to the practice of medicine.

Now, of course, when you come here today you speak for that very outstanding group of men on your board of regents.

Colonel ROGERS. Yes, sir.

Senator HILL. Now Colonel, you have your site resolved, and what you need now is construction money; is that right?

Colonel ROGERS. Yes, sir; we must have the money in hand before we can turn out the bids.

ACTION OF BUREAU OF THE BUDGET

Senator HILL. Now, I believe that the board requested $7,300,000 for the building. The Department of Health, Education, and Welfare approved that request in the budget; is that correct?

Colonel ROGERS. That is correct.

Senator HILL. So you not only have your recommendation, but the recommendation of the National Library of Medicine Board, composed, as I say, of some of the most distinguished men in America, and you also have the Department of Health, Education, and Welfare, headed by Secretary Folsom, joining in this request for these construction funds?

Colonel ROGERS. Yes, sir.

Senator SMITH. But not the Bureau of the Budget?

Senator HILL. But not the Bureau of the Budget.

Mr. KELLY. I would like to say, Mr. Chairman, the Secretary has taken tremendous interest in the library and the need for the new facility, and used his good offices to resolve the differences on planning, so that we can proceed, and I think that the only reason the request is not before you now is not anything but the result of an overall policy not to include constructions funds in the 1959 budget for any of the projects, as a general budgetary policy, in light of the economic situation as it then existed.

Senator HILL. No matter how great or desperate the need is.

Mr. KELLY. Yes.

Senator HILL. The patient may be dying for want of oxygen, but that there shall be no oxygen.

TIME REQUIRED FOR CONSTRUCTION

How long will it take to construct this building, Colonel?

Colonel ROGERS. We are told that it will take at least 2 years to construct the building. It is a large building. I think it will take 2 years to construct it, if construction can begin at the beginning of the construction season. It is going to take a longer period to construct it if construction begins at the end of the construction season. The figure given us was a range of 24 to 28 months' time.

Senator HILL. In other words, if you had your plans, say, by the last of the fall, and were prepared to send out bids for awarding contracts sometime in March, you might get your building complete by May of 1961?

Colonel ROGERS. Yes, sir; the spring of 1961, I would think, would be the time when the building might be completed.

Senator HILL. I believe 1961 would be the 125th anniversary of the founding of the library?

Colonel ROGERS. That is right .

Senator HILL. That would be a fine way to commemmorate that library, would it not? To rebuild it?

Colonel ROGERS. Yes, sir.

Senator HILL. Senator Smith, do you have any questions?

Senator SMITH. I have no questions.

BOARD OF REGENTS, NATIONAL LIBRARY OF MEDICINE

Senator HILL. I think it might be well for the record, Colonel, if you could supply us with the names of the members of your National Library of Medicine Board of Regents.

Colonel ROGERS. I will do that, sir.

(The information referred to follows:)

The members of the Board of Regents of the National Library of Medicine are:
Dr. I. S. Ravdin (Chairman), professor of surgery, University of Pennsylvania
Miss Mary Louise Marshall, professor of medical bibliography, Tulane University
Dr. Basil G. Bibby, professor of denistry, University of Rochester
Dr. Jean A. Curran, trustee and consultant, Bingham Associates Fund, Boston
Dr. Champ Lyons, professor of surgery, Medical College of Alabama
Dr. Michael E. De Bakey, professor of surgery, Baylor University
Dr. Thomas Francis, Jr., professor of epidemiology, University of Michigan
Dr. Earnest H. Volwiler, president, Abbott Laboratories
Dr. Leroy E. Burney, Surgeon General, Public Health Service
Maj. Gen. S. B. Hays, Surgeon General, United States Army
Rear Adm. B. W. Hogan, Surgeon General, United States Navy
Maj. Gen. D. C. Ogle, Surgeon General, United States Air Force
Dr. William S. Middleton, Chief Medical Director, Veterans' Administration
Dr. John T. Wilson, Assistant Director for Biological and Medical Sciences, National Science Foundation
Dr. L. Quincy Mumford, Librarian of Congress

There are currently two vacancies on the Board, for which appointments are pending.

SPACE AND FACILITIES

Senator HILL. How will the outside of the building be finished?

Colonel ROGERS. That has not been exactly decided yet. At this point of the diagrammatic phase of the plans, it is very difficult to say what it will be. It will be a reinforced-concrete structure, basically, with probably facing of masonry to try to tie it in somewhat with the rest of the NIH reservation.

Senator HILL. You might supply for the record, too, the total space to be contemplated by the plans, as finally approved by the Budget.

Colonel ROGERS. Yes, sir.

Senator HILL. And any other information, such as the provisions contemplating the feeding of your staff, the distance to the library, and that sort of thing.

Colonel ROGERS. Yes, sir.

(The information requested follows:)

TOTAL SPACE

The total amount of space to be provided in the new building of the National Library of Medicine will be 232,200 square feet. This allocation was approved by the Bureau of the Budget on March 17, 1958.

LUNCHROOM FACILITIES

A lunchroom facility of 2,700 square feet, both serving and seating area, is provided in the plans; this will accommodate library staff and patrons in 3 shifts. The distance of the library from the nearest cafeteria on the NIH reservation, either in existence or projected, is one-half mile one way.

PLAN OF LIBRARY

Colonel ROGERS. Now this [indicating] is the diagrammatic plan for the main floor. There are to be 5 floors to the building; there are 3 floors below ground, and this main floor is at ground level; this is the level where the public services of the library will be conducted. A

library is something like an iceberg; about six-sevenths of the library the public never sees.

The entrance is here [indicating], and the public catalog is at the center, with the reading room adjacent to it, and all of the library workers who must make constant reference to the catalog are ranged around it.

Then here [indicating] is the History of Medicine Division, which has custody of our great collection of old and rare medical books.

The floors below this are mainly stack floors, and this is an example [indicating]. Within the stack areas there will be a few study rooms for workers who come to Washington to spend a period of time, say weeks or months or even years, working with our books. They do that now, and we expect they will do it more frequently when we obtain decent facilities in which they may work.

I think it is a good plan. I think we are fortunate to have the architectural firm we do have working for us.

Senator HILL. Do you have any questions, Senator Smith?

Senator SMITH. No questions.

Senator HILL. Is there anything you would like to add Colonel?

WORK OF LIBRARY

Colonel ROGERS. No, sir. I did bring a lot of things to show to you. I would like to show you some examples of what the Library is doing for the medical profession of this country.

The Library provides the basic medical bibliographical record. We publish this Catalog every year. This is the 1957 Catalog, which is a record of all the books that went through our hands during that year. It is published and distributed, for all to see and read and use, to make the profession aware of what is available in the various disciplines, worldwide.

In addition to this annual publication, which is cumulated every 5 years, we publish monthly the Current List of Medical Literature. It is a record of medical journal articles appearing throughout the world. This comes out each month. It is cumulated each 6 months. It is the largest index in the world on any subject if we are considering it solely from the viewpoint of the number of articles handled. We indexed in the publication last year 111,000 articles and we provided 500,000 subject and author entries to these articles. I might say that over 10 percent of the articles that were listed here last year were in Slavic tongues.

In addition to this continuing bibliographic record, we publish, from time to time, special bibliographies on given subjects. This [indicating] is one on cancer chemotherapy which came out in the fall of 1956. We have in press now a long bibliography on psychopharmacological agents. We will finish in June a bibliography on space medicine, of which we have already offered a preliminary edition to the Aero Medical Association, and have provided copies for a meeting of AGARD (NATO) that was held in Paris this month. We have had in preparation for 3 years, and it is due for publication 6 weeks from now, the only modern Russian-English medical dictionary that exists. We expect to publish, some time this summer, a guide to the Russian medical literature which is again something that is needed. It will be a "how to do it" book that we will get out to every medical library in this country.

Besides the bibliographical record which we provide, we also have an enormous interlibrary loan service. We loan 100,000 items a year to physicians all over this country, and indeed throughout the world. These are our main current service objectives, in addition to our long-range mission which must include the preservation of this material for posterity.

Senator HILL. Any questions, Senator Smith?

Senator SMITH. I have no questions.

Senator HILL. Is there anything else you would like to add?

Colonel ROGERS. No, sir; I think not.

Senator HILL. Now, you look over the record, please, and if there is anything else you think would be informative or helpful to this committee, do not hesitate to put it in the record.

Colonel ROGERS. Yes, sir.

Dr. BURNEY. I think that after your discussion here with Colonel Rogers, that it is only proper for me to add that we have a very competent individual in the colonel, and also a very dedicated and devoted individual, to this particular service. We are very fortunate to have such a person serving in this capacity.

Senator HILL. I am very happy to hear you say that, because certainly by contact with the colonel and my observations of him only confirm everything you said.

Colonel, we certainly are very much obliged to you.

Colonel ROGERS. Thank you Senator.

Senator HILL. We appreciate your statement very much, and do not hesitate now, if there is anything else, because we want it in the record, and want the record to be as complete as possible.

Colonel ROGERS. Yes, sir.

PUBLIC HEALTH SERVICE COMMISSIONED OFFICER PERSONNEL BILL

Senator HILL. Gentlemen, before we recess, everybody is very much interested in this—and I know you are, too—in this Public Health Service commissioned officer personnel bill, and I believe that bill is now being held in the Bureau of the Budget.

There is a very definite and real need for that bill. Is there anything that you can tell us about this bill, General?

Dr. BURNEY. Yes, sir. As I recall last year the needs of the Service with reference to its commissioned officer personnel were discussed with you. You evidenced a great deal of interest and asked for information upon which you might prepare a bill yourself.

Secretary Folsom had also become quite interested in it, and asked us to draft legislation or specifications.

That was being done at the time, and we informed you then we appreciated your offer.

The Department asked us to prepare such legislation. That has been done.

The specifications of the bill were approved, I believe, in principle, by the Bureau of the Budget.

Then it came back to us for drafting the detailed legislation. That has gone to the Bureau of the Budget. It is being reviewed by it, and with remarks from the Department of Defense, because we are asking in the legislation only for a parity with the other uniformed services and with no exceptions to that.

So far as I know, we have not received anything further on an agreement yet to submit the bill to the Congress.

Senator HILL. How long has it been since this last information went to the Bureau?

Dr. BURNEY. About February, wasn't it?

Mr. KELLY. I would say about 6 weeks to 2 months.

Senator HILL. All right. Is there anything else you would like to add to the record concerning this, General?

Dr. BURNEY. No, sir. Thank you, sir.

Senator HILL. I am very much interested in getting that bill up here so we may get it introduced and get some action on it. I think it is an important piece of legislation. It is something that is necessary for the Public Health Service, and it is something which the officers of the Public Health Service are entitled to. So do whatever you can to get that bill up here.

Mr. KELLY. Let me see if I can get you a report on that when we reconvene.

Senator HILL. All right.

General, I wish you would go over the testimony, and any additional factors or data you think you might submit, I wish you would do that, and supply us with a supplementary statement.

Dr. BURNEY. I would be pleased to do that.

Senator HILL. We want to thank all of you very fine officers of the Public Health Service for your fine contribution to the work of this committee, and for your statements and appearances here at these hearings.

Dr. BURNEY. I would like to say that we can say, in all frankness and sincerity, that the interest and understanding, and the support of the chairman and members of this committee, have been extremely helpful to us in helping to meet these research needs, and I assure you it is very heart warming to us to have such understanding and support.

Senator HILL. I am sure Senator Smith will agree it is a source of great inspiration and gratification to us to be able to work with you gentlemen and we shall continue to work and cooperate in an endeavor to support you to the best of our ability. We thank you.

LETTER FROM SENATOR HENNINGS

Senator HILL. Senator Hennings has written me a letter endorsing any action which this committee may take toward improving the deplorable conditions of the library as it now stands. Senator Hennings' letter will be inserted at this point in the record.

(The letter referred to follows:)

UNITED STATES SENATE,
COMMITTEE ON RULES AND ADMINISTRATION,
April 11, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Appropriations for the Departments of Labor, and Health, Education and Welfare, and Related Agencies, United States Senate, Washington, D. C.

DEAR LISTER: Recently I received a letter from the librarian of the Los Angeles County Medical Association, advising me that the valuable collection of books constituting the National Library of Medicine is stored in a rickety old building badly in need of repair or replacement.

In your capacity as chairman of the Subcommittee on Appropriations for the Departments of Labor, and Health, Education, and Welfare, and Related Agen-

cies, undoubtedly you and the members of your subcommittee are in a much better position to judge the merits of the situation, but I want you to know that any reasonable steps to improve conditions at the above library have my wholehearted endorsement.

Yours sincerely,

THOMAS C. HENNINGS, Jr.,
Chairman.

LETTER FROM SENATOR MORSE

Senator HILL. Senator Morse has received a letter from Dr. Max H. Parrott, secretary-treasurer, Oregon State Medical Society, Portland, Oreg., transmitting a resolution of that society, petitioning Congress to provide funds for the construction of this much needed library building. Dr. Parrott's letter, the resolution, and Senator Morse's reply thereto will become a part of the record at this point.

(The material referred to follows:)

OREGON STATE MEDICAL SOCIETY,
Portland, Oreg., February 12, 1958.

Hon. WAYNE MORSE,
Senate Office Building,
Washington, D. C.

DEAR SENATOR MORSE: The council of the Oregon State Medical Society at its regular monthly meeting on February 1, 1958, adopted a resolution petitioning the Congress of the United States to provide adequate funds for a new building to house the National Library of Medicine.

A copy of the resolution and a copy of the editorial appearing in the November 2, 1957, issue of the Journal of the American Medical Association which stimulated the adoption of the resolution, are enclosed.

The Oregon State Medical Society would be most appreciative if you would give some consideration to the conditions under which the National Library of Medicine is currently required to operate.

Respectfully yours,

MAX H. PARROTT, M. D.,
Secretary-Treasurer.

RESOLUTION PETITIONING THE CONGRESS TO APPROPRIATE SUFFICIENT FUNDS TO PROVIDE NEW AND ADEQUATE FACILITIES FOR THE NATIONAL LIBRARY OF MEDICINE

(Adopted by the council on February 1, 1958)

Whereas the Council of the Oregon State Medical Society has taken cognizance of the need of a new building for the National Library of Medicine, as outlined in the editorial "National Library of Medicine" which appeared on page 1153 of the November 2, 1957, issue of the Journal of the American Medical Association; and

Whereas the Council of the Oregon State Medical Society believes that it is imperative to have modern facilities for the National Library of Medicine in order properly to serve medical education and health in this Nation: Therefore be it

Resolved, That the Council of the Oregon State Medical Society urges the Congress of the United States to provide adequate funds for a new building for the National Library of Medicine; and be it further

Resolved, That a copy of the editorial referred to above, and a copy of this resolution, be sent to the Senators and Congressmen of the State of Oregon, to the librarian of the National Library of Medicine, and to the American Medical Association.

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COPY OF EDITORIAL REGARDING THE NEED FOR A NEW BUILDING TO HOUSE THE NATIONAL LIBRARY OF MEDICINE WHICH APPEARED IN THE NOVEMBER 2, 1957, ISSUE OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

NATIONAL LIBRARY OF MEDICINE

The National Library of Medicine, established by Public Law 941, 84th Congress, has just completed its first year of operation under its new sponsor, the Public Health Service, and the first annual report of the library has just been issued. The record is an amazing one. It would appear that the renaissance of this great institution, begun through the initiative of the Army Medical Service, is now coming to the full flowering.

The library has vigorously pushed its comprehensive acquisitions policy, and is receiving important medical literature from the four corners of the earth. Under its new loan policy this material is freely available to physicians throughout the United States, on request made through local libraries. The publications program of the library, which includes catalogs, indexes, and bibliographies of all kinds, is most impressive, and is a clear indication that the library is utilizing its full resources in offering a truly national service. Everyone who must wrestle with the vast and complicated outpouring of medical literature—and this includes, at one time or another, almost all physicians—can feel only pleasure and pride in the library's achievement.

There is one somber fact to be noted: After 40 years of striving the library has not yet obtained the new building which it so desperately needs. If any doubt existed as to the reality of this need, it will be dissipated by perusal of the current issue of the National Library of Medicine News, which carries a description of how, during September, over 400 books of the early 19th century were damaged when water backed up and overflowed from faulty drainpipes in the library's present antiquated structure, built in 1887. Among the total losses were several volumes of Sir Astley Cooper's works, Abraham Colles' treatise on surgical anatomy (1811), and a hand-painted illustrated edition of Cooke's pocket anatomy. The library describes the loss as tragic; it seems to us that this is the word for the whole situation of delay in construction of a new building. It is a mystery why funds have not been obtained for a measure which is of immediate concern to every worker in the medical sciences, and indeed to the health of the Nation and the whole future of the medical research and practice.

MARCH 17, 1958.

Dr. MAX H. PARROTT,
Secretary-Treasurer, Oregon State Medical Society,
Portland, Oreg.

DEAR DR. PARROTT: Thank you for bringing to my attention the interest of the Oregon State Medical Society in obtaining adequate facilities for the National Library of Medicine.

In an effort to be of assistance to you in this matter, my office called the Secretary of Health, Education, and Welfare to determine what the present status of the proposed Medical Library Building is. I am advised that in the current budget the Department is requesting $129,000 for the purpose of drawing up final construction plans. Previously $350,000 was authorized for this preliminary work and the $129,000 this year represents the balance of that larger figure. If all goes well, and the plans are approved, actual construction funds would be requested in next year's budget.

In a further effort to give this matter the attention that its importance deserves, I have forwarded the resolution and your letter to the chairman of the Senate Appropriations Committee with the request that it be brought to the attention of the subcommittee having jurisdiction over the appropriations for the Department of Health, Education, and Welfare so that body might give consideration to the proposal at the time hearings are held on the Department's budget request.

I hope that the appropriations bill, as reported, will contain language leading to the end that you and many other medical societies desire.

Sincerely yours,

WAYNE MORSE.

(Whereupon, at 12:05 p. m., Friday, April 25, 1958, the subcommittee recessed until 10 a. m., Tuesday, April 29, 1958.)

LABOR—HEALTH, EDUCATION, AND WELFARE APPROPRIATIONS, 1959

THURSDAY, MAY 8, 1958

UNITED STATES SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D. C.

The subcommittee met at 2 p. m., pursuant to recess, in room F–82, the Capitol, Hon. Lister Hill (chairman of the subcommittee) presiding.

Present: Senators Hill and Hayden.

DEPARTMENT OF LABOR

BUREAU OF EMPLOYMENT SECURITY

STATEMENT OF ROBERT C. GOODWIN, DIRECTOR

FINANCING OF PROGRAM

Senator HILL. The committee will come to order.

Senator HAYDEN. Before you proceed, I just want to say that I have here with me a clerk from this committee, Mr. Joe Gonzales, who was, for 3 years, in charge of this Mexican farm labor program. During that time, he brought in four or five hundred thousand of them, supervised bringing them in. In 1 month, Monterey shipped across the border 120,000 of them at the rate of 4,000 men a day. So you can see that this has been a very large program.

If you will be kind enough to allow me to ask a few questions?

Senator HILL. Yes.

Senator HAYDEN. Mr. Goodwin, if the Senate committee approved the latest budget estimate for the Mexican farm labor program, which is $2,250,000, charging $910,600 to the revolving fund, and if the $910,600 were deleted on a point of order, how would you be able to carry on the program with an appropriation of only $1,339,400?

Mr. GOODWIN. Well, Senator, I don't think we would be able to carry it on for $1,339,400. As the budget was presented the cost of the contracting alone was estimated at $910,600. Now, that would leave us $428,800 for other activities of the program. The compliance function costs an estimated $839,300, to say nothing about overhead administrative costs and the other functions that are connected with this program.

So I think the answer is that that would be so inadequate that we really couldn't do the job with that amount of money.

EFFECT IF INCREASE CHARGED TO REVOLVING FUND

SENATOR HAYDEN. What effect would there be on the program if the Congress appropriated the $2,030,600 approved by the House Appropriations Committee, assuming that $1,550,000 would be charged to the revolving fund?

Mr. GOODWIN. The operation of the program under those circumstances, sir, would be seriously impaired in our opinion. That would give us a reduction of about $219,400. As we see it, it would mean that we would have to reduce our operations drastically. We would have to close two of the centers on this side of the border. We would have to curtail work at all of the other centers. Specifically, we think we would have to cut out the work we are now doing on Saturdays, Sundays, holidays, and other overtime. We would have to make a deeper cut than the figure of $219,400 indicates, because we would have some liquidation costs. We would have to lay off some people. We would have to pay them for accumulated leave and incur other liquidation costs.

Now, with the closing of 2 centers and restricting the other centers to a 5-day week, the growers would have to travel greater distances. They would have to go to the centers that were open and many of them would consequently have to travel a greater distance. They would have to wait longer to get the workers that they need. These would increase the cost to them and it would also mean we would be forced to raise the contracting fee from the current rate of $10 to a rate that we estimate at about $15.

WORK UNDER HOUSE ALLOWANCE

Senator HAYDEN. With the $480,600 actually appropriated by the House, how much of the program would be carried out?

Mr. GOODWIN. In our opinion, Senator, with only that amount of money it would not be possible to carry on any kind of program. We think that all that could be done with $480,600 would be to liquidate the program.

Senator HAYDEN. With that $480,600 appropriated by the House, just for compliance activities, will those activities be carried out at the same level of performance as at the present?

Mr. GOODWIN. No. The House committee was under a misapprehension when they thought the appropriation of $480,600 was not the full amount required for the compliance activities.

You may recall, sir, we have had that staff divided and budgeted under two headings. A compliance man performs the function of enforcing the provisions of the law which is the compliance part of it. He also carries on a lot of service functions which are done for the employer such as the extension of the contracts and recontracting. He also gets around to the farms and explains the provisions and regulations of the program to the workers and employers. So we have had a division of costs here between the strictly compliance work and the service functions to the employer. Both of those functions, taken together, amount to $839,300. So they didn't even appropriate enough to carry on the full compliance program.

REASON FOR CHANGING SOURCE OF FUNDS

Senator HAYDEN. Now, I wish you would tell the committee just why this change was made in the source of funds from direct appropriations to the farm labor supply revolving fund? How did it come about?

Mr. GOODWIN. The Bureau of the Budget asked for a part of this money to come from the revolving fund. In other words, they wanted part of the cost of the program shifted to the employers.

Senator HAYDEN. That idea originated in the Bureau of the Budget and not in the Department of Labor?

Mr. GOODWIN. That is right, Senator. Yes.

Senator HAYDEN. Did you have any opportunity to protest or know anything about it when it was happening?

Mr. GOODWIN. We knew that it was being done, yes. We knew. I don't know whether you would say we had an opportunity to protest or not. At any rate, it went up this way. It came up this way.

Senator HAYDEN. Is not the use of the revolving fund for expenses of the program contrary to the law which established the Mexican farm labor program? I quote, in that connection, from the law,

(2) to reimburse the United States for essential expenses, not including salaries or expenses of regular department or agency personnel, incurred by it for the transportation and subsistence of workers under this subchapter in amounts not to exceed $15 per worker.

FUNDS SOURCE IN VIOLATION OF LAW

Now, it seems to me it is a violation of the law when the law says "not including salaries or expenses of regular department or agency personnel," for the Bureau of the Budget to say that it shall be used for that prupose.

Mr. GOODWIN. As I understand the action taken by the House on a point of order, they were saying that this had not been authorized by basic legislation.

Senator HAYDEN. That is how it went out on the point of order being contrary to this provision of law.

Mr. GOODWIN. I think that is right, so I think that would certainly support the point you have made and the point that I personally agree with.

Senator HAYDEN. Are any of the Labor Department employees who will be paid with revolving fund money "regular Department or agency personnel"?

This law prohibits that and I just wanted to know if that has been done.

Mr. GOODWIN. No. The only personnel paid from the revolving fund are the Public Health Service temporary personnel who are mainly in the centers.

Senator HAYDEN. Then the only alternative the Senate has is to follow the practice of former years and appropriate this money? That is all we can do if you are going to carry on the program?

Mr. GOODWIN. It would seem to be so; yes.

CUT IN SIZE OF PROGRAM

Senator HAYDEN. The program probably would not be as large as it was before, but the way you submitted your estimates you took that into consideration?

Mr. GOODWIN. We did; yes, sir.

Senator HAYDEN. Thank you.

Senator HILL. Thank you, Mr. Chairman. We appreciate that very much.

Is there anything you would like to add, Mr. Goodwin?

Mr. GOODWIN. My colleagues have indicated to me that I really didn't answer fully one of the questions involving the amount of money. It is true that we are expecting somewhat fewer Mexican workers to be imported this year. We don't know yet just how many because we know we have a lot of unemployment. We don't know how many of these people can be induced to take farm work and how many of them are in places where we can recruit them. However, there is a possibility that we may need additional money for this program over and above what is in our request because of the difficulties in carrying through a tightened up program in order to place more domestic workers. In other words, in order to make sure, we are using domestic workers wherever possible.

Senator HAYDEN. That is the policy, I understand, in every area where this work is to be done, that you are to find out if you can get domestic labor.

Mr. GOODWIN. That is right.

Senator HAYDEN. And the ordinary American will not do this work.

Mr. GOODWIN. When jobs are plentiful, that is right. The point is, because of increased unemployment we are making renewed efforts in this area and we are now reappraising our needs to do that. We may very well decide that even more than what we have asked for here will be necessary to carry through that objective. I just wanted to make that clear.

Senator HILL. Is there anything else?

Senator HAYDEN. That is all I have.

Mr. GOODWIN. That is all. Thank you very much.

Senator HILL. Thank you very much. And we certainly thank you, Senator Hayden.

LETTER FROM SENATOR BENNETT

Senator HILL. I have just received a letter from Senator Bennett, of Utah, with respect to the Mexican farm labor program, in which he encloses correspondence from Utah cropgrowers and canners, and urges our committee to allow the budget estimate for the item. These communications will be included in the hearings:

(The communications referred to follow:)

UNITED STATES SENATE,
COMMITTEE ON FINANCE,
May 8, 1958.

Hon. LISTER HILL,
Chairman, Appropriations Subcommittee on Labor,
Health, Education, and Welfare,
United States Senate, Washington, D. C.

DEAR LISTER: To supplement my recent telephone conversation with you and Carl Hayden regarding appropriations for recruitment and procurement of Mexican nationals, I am enclosing correspondence from Utah cropgrowers and canners explaining the concern of the people of my State over this problem. I respectfully request that these letters and telegrams be included in the hearings on this problem.

The canners and cropgrowers of Utah would be hard pressed to handle the tomato, beet, and other crop harvests without the employment of Mexican nationals. The unemployment situation in Utah is far more favorable than the national average. Those who are unemployed will not take the kind of work that agriculture offers.

I urge your committee to restore the appropriation for this program to the Department of Labor recommendation of $2,250,000. I will appreciate your consideration and cooperation in this matter.

Kindest personal regards.

Sincerely,

WALLACE F. BENNETT.

Enclosures 5.

OGDEN, UTAH, *May 8, 1958.*

Hon. WALLACE BENNETT,
United States Senator from Utah,
Senate Office Building, Washington, D. C.

Members of the Utah Canners Association are seriously concerned at the possibility of a shortage of farm labor to adequately harvest canning crops. We join with the members of the Utah Canning Crops Association in requesting you to use your best efforts toward securing the reinstatement of the normal appropriation to assist in the recruitment and procurement of Mexican nationals to carry on the farm labor program in Utah.

HARVEY F. CAHILL, *Secretary.*

LOGAN, UTAH, *May 8, 1958.*

Senator WALLACE F. BENNETT,
Washington, D. C.:

On behalf of 5,000 canning crop growers in Utah, we appeal to you to use your best efforts to get the normal money appropriated for carrying on the Mexican farm labor program.

A. W. CHAMBERS,
Secretary, Utah State Canning Crops Association.

SALT LAKE CITY, UTAH, *May 5, 1958.*

Hon. WALLACE F. BENNETT,
United States Senate, Washington, D. C.

DEAR SENATOR BENNETT: The House cut in the appropriation for importation of Mexican nationals from $2,250,000 to $480,600 will be disastrous to the farm labor program if it is not restored. We urge that you do everything possible to get the Senate to increase the appropriation to the $2,250,000 as requested by the Department of Labor and the President.

Unemployment in the industrial areas seldom provides much help for farmers. These people will not do the work which farmers need. We will, of course, use all the domestic labor that will do farmwork, but we are certain that a Mexican national program similar to other years will be necessary. If the Department does not have funds with which to carry this program, the additional cost will fall on farmers or the crops will go untended and unharvested. Farmers cannot afford this additional expense.

We will appreciate anything you can do to help secure the restoration of this fund.

Sincerely,

UTAH SUGAR BEET GROWERS ASSOCIATION,
ED J. HOLMGREN, *President.*

SALT LAKE CITY, UTAH, *May 5, 1958.*

Hon. WALLACE F. BENNETT,
United States Senate, Washington, D. C.

DEAR SENATOR BENNETT: It has come to our attention that the House of Representatives cut the appropriation for the Labor Department for importation of Mexican nationals from $2,250,000 to $480,600. The request of the Department and of the President was for the $2,250,000 which seems to be necessary to carry out a satisfactory program of bringing in Mexican nationals. We feel that this cut was a result of some unemployment panic. Although it is true that there is more unemployment than we would like to see, this unemployment is not in agriculture, and experience indicates that very little additional domestic help is made available when unemployment occurs. These people will not do the kind of work that agriculture has to offer.

We urge that you do everything you can to get restoration of the amount as recommended by the Department of Labor and the President. We feel certain that this will be necessary if the farm labor situation is to be satisfactory this year. Your help in this regard is very much appreciated.

Sincerely,

UTAH STATE FARM BUREAU FEDERATION,
FRANK G. SHELLEY, *Executive Secretary.*

SALT LAKE CITY, UTAH., *May 6, 1958.*

Hon. WALLACE F. BENNETT,
United States Senate,
Washington, D. C.

DEAR SENATOR BENNETT: Our company buys from the grower and processes a sizable quantity of tomatoes each year, and consequently, we are vitally interested in the farm labor problem as it presently exists.

We are very much aware of the general condition of unemployment that exists throughout the country and certainly our growers and we are interested in providing labor for our own people to the greatest possible extent. It seems apparent, however, that the unemployment is not in agriculture, and our experience has taught us that we cannot depend on people moving from industrial employment into agricultural employment and doing that work which must be done. For these reasons, we are very much concerned about the reduction in the appropriation for the Labor Department's use for importation of Mexican nationals. We are quite fearful that unless this program is continued, there will be a considerable reduction in the acreage planted to tomatoes as well as other crops, such as sugar beets which require considerable hand labor. If the acreage planted to these crops is reduced, there will be an increase in the acreage planted to grain and hay, which, as you know, are already in surplus supply.

We would appreciate very much your doing everything possible to assure a continuation of this program with the necessary funds for its satisfactory operation.

Very truly yours,

HUNT FOODS, INC., OF UTAH,
D. J. ISOM, *General Manager.*

LETTER TO SENATOR BENNETT FROM SALT LAKE FARM LABOR ASSOCIATION

Senator HILL. Senator Bennett has also received a letter from the Salt Lake Farm Labor Association which he has requested be included in the record. The letter will be inserted at this point.

(The letter referred to follows:)

SALT LAKE COUNTY FARM LABOR ASSOCIATION,
Salt Lake City, Utah, May 6, 1958.

Hon. WALLACE F. BENNETT,
United States Senate,
Washington D. C.

DEAR SENATOR BENNETT: It has come to our attention that the House of Representatives has cut the appropriation for the Labor Department for the importation of Mexican nationals from $2,250,000 to $480,000. We understand the request from the Department of Labor was for $2,250,000 which they report

is necessary to carry out satisfactorily the program of bringing Mexican nationals into the United States to supplement agricultural labor.

As the Farm Labor Association, we feel this cut was the result of an unemployment panic. It may be true there is more unemployment than we would like to see. This unemployment is not in agriculture in our area. Experience has indicated that very little additional domestic help is made available when unemployment of this kind occurs. We have also found that these people do not want or do the kind of work that agriculture has to offer.

We urge that you do everything you can to get restoration of the amount recommended by the Department of Labor at present for this activity. We believe this amount will be necessary if the farm labor situation is to be carried out satisfactorily during this present year. Your help in this matter is very much appreciated.

Sincerely,

ELMO W. HAMILTON, *President.*

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

PUBLIC HEALTH SERVICE

LETTER FROM DR. ANDERSON

Senator HILL. When Dr. Anderson, of the Communicable Disease Center of the Public Health Service appeared before the committee in support of his budget estimate for next year, I requested that he furnish the committee with an explanation of how he would utilize $950,000 over the budget estimate, which was the amount his original estimate to the Department was reduced. Dr. Anderson has responded by letter of May 8, which letter will be made a part of the record of these proceedings at this point. (Colloquy appears on p. 458.)

(The letter referred to follows:)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
PUBLIC HEALTH SERVICE,
May 8, 1958.

Hon. LISTER HILL,
United States Senate, Washington, D. C.

DEAR SENATOR HILL: In accordance with your request, I am furnishing you information as to how $950,000 would aid us in meeting the needs in communicable disease control as we see them today were such funds available to us above the $6,200,000 requested of Congress in the 1959 budget document. In the year between the time of the submission to the Department of our 1959 estimate and your request for current information, there have occurred both technical developments and certain disease problems which determine the relative emphasis I now give certain of the program activities described in the original request of the Department, and referred to in the hearings before the House and Senate subcommittees.

As you revealed in the hearings on the appropriation request, there is increasing alarm amongst physicians, hospitals, and health departments in many parts of the country about the occurrence of infections, and particularly staphylococcal infections, among patients and hospital staff. Increasing recognition of the number of cases occurring and the serious import of these infections, which too frequently result in death, is the basis of this alarm. Infant mortality rates in some areas and in some hospitals have shown decided increases. Furthermore, the problem is not confined to babies; young mothers, medical and surgical patients, and the chronically ill and aged are not uncommonly afflicted. Even a reasonable approximation of the members of cases and deaths could be but a guess. However, official statements of hospital groups, professional medical organizations, and health departments alike in the last year attest to the mounting importance of these infections. At the time of the original submission of our request to the Department, we wished to add field investigative staff to the few that we have had assigned to this task over the past 2 years, and we requested $50,000 for that purpose. The needs at this time are, (1) a much larger addition

to the investigative staff working with health departments and hospitals concerned, (2) increased technical support of State health department personnel so that they can take preventive action in hospitals in their States, (3) the development of staphylococcal laboratory services to perform bacteriophage typing, which is required for both investigative and control purposes, (4) the training of laboratory personnel in bacteriophage techniques, (5) the provision of bacteriophages to these laboratories, and (6) the establishment of a staphylococcus reference center, as requested of us by the American Public Health Association, to serve as a base laboratory for all activities. To meet these needs promptly and to make a significant approach to the problem in such a fashion as to achieve some measure of prevention and control would require that we devote about $500,000 to these activities in fiscal year 1959. The objective of such a program would be to develop competencies for investigation, prevention, and control of staphylococcal infections over the country and to provide workers with the technical backstopping and assistance which is required in any effort of this sort.

You may recall my enthusiasm in my testimony for the potentialities of the fluorescent antibody technique as a cheaper, quicker, more accurate laboratory method of diagnosis of infectious diseases for health departments, hospitals, physicians, and laboratories. There are 16 organisms causing disease and threatening the public for which we have been able to develop experimental lots of fluorescent antibody materials. Each organism requires the development of its own specific fluorescent antibody. With the present staff, we have been able to achieve this much progress in the last several years. With only one of these organisms have we had the time to test the technique under circumstances that prevail in most laboratories over the country. This test revealed that it will be necessary to refine the technique further before we advocate its use generally. Then, we must be able to respond to the requests for training of diagnostic laboratory personnel in the use of the materials and the equipment. At the present rate of progress, it will be several years more before the fluorescent antibody technique will find even limited use. The possibilities of this new method are recognized by laboratory personnel, who are anxiously awaiting the time they will use it in their regular laboratory procedures. Every person on the staff of the Communicable Disease Center who has talent in this field is devoting himself to work on fluorescent antibodies. Yet there are hundreds of other applications of the technique that remain for exploration. Three hundred and ten thousand dollars could very profitably be added for further developmental work and to train State and local laboratory personnel in the use of the fluorescent antibody method in diagnosing some common problems such as rabies. Thus, we could commence spreading the benefits of this technique in 1959 throughout the country.

The increasing complexity of research upon the etiology of disease and the increasing use of laboratory procedures as a guide to control and treatment have drained our limited supply of bacteriological diagnostic reagents which we provide to qualified investigators and State laboratories over the country, to the point where we are unable to respond to requests from these groups for materials for which we are the only source. In order to step up our production of these highly specific scientific items, which are commercially unprofitable, I should plan on spending $65,000 of an increase this coming year.

In fiscal year 1958, the Congress increased our rabies work, specifically in the Southwestern part of the United States where we have found the bat to be frequently infected with rabies virus. We are also investigating the rabies problem in the Southeastern and Eastern part of the United States, where the fox seems to be the most commonly infected wild animal. In addition to studies in these areas, designed to provide information on the possible role that these animals might play in transmitting rabies into dog populations, it is essential that study be given to the role of skunk populations in the Mississippi and Missouri Valleys in transmitting rabies to animals and man in these areas. So that attention can be given to the rabies problem in the midcontinent area, we should establish a field station in the upper Midwest similar to those in the Southeast and the Southwest. This new station will require $75,000 for its operation. In addition, our program provides for consultation, demonstrations, and technical assistance to all of the States.

The Communicable Disease Center must give attention to all of the many communicable diseases that affect our people or threaten their health. This requires that we maintain a small number of competent workers in each of the highly specialized disease areas. These specialists have talents peculiarly necessary to work on particular diseases. Such a staff is recruited only with great difficulty and is developed slowly over the years. Even if they could be readily

turned to other tasks, I would doubt the wisdom of leaving uncovered the disease areas in which they presently work. However, for each of the four areas of increased work I suggest above, we do have some individuals of great competence around whom we can develop, through recruiting, training, and good supervision, the staff which is required to carry out the programs I have outlined.

I hope this responds in a fashion such as you desired when you requested me to furnish information about how $950,000 would be expended in 1959 if we had it. Should you desire greater detail, I can also furnish that.

Sincerely yours,

ROBERT J. ANDERSON,
Assistant Surgeon General, Chief, Communicable Disease Center.

FOREIGN QUARANTINE SERVICE

LETTER FROM SURGEON GENERAL

Senator HILL. When the Surgeon General appeared before the committee in support of the estimate for foreign quarantine service, I requested him to inform us of any remedial action necessary to rectify inequitable overtime compensation rates between foreign quarantine personnel and other Federal employees in like positions and performing similar duties. The Surgeon General has responded by letter, which will appear in the record at this point. (Colloquy appears on p. 614.)

(The letter referred to follows:)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
PUBLIC HEALTH SERVICE,
Washington, D. C., May 13, 1958.

Hon. LISTER HILL,
United States Senate, Washington, D. C.

DEAR SENATOR HILL: During the course of hearings before the Labor-Health, Education, and Welfare Subcommittee of the Senate Committee on Appropriations, reference was made to a submission to the Comptroller General with respect to the payment of overtime compensation pursuant to Public Law 85–58 approved June 21, 1957. You requested me to advise you after the Comptroller General had rendered a decision as to any need for modification of existing legislation to place Public Health Service employees on a basis more nearly comparable to employees of other agencies performing similar duties. The Comptroller General replied to our inquiry on May 2, 1958 (B–135138) and subsequent to that time a member of your staff has asked for an expression of views concerning changes that might be desirable in the light of the interpretation of the Comptroller General.

Our administrative instructions covering payment of overtime compensation to employees were considered by us to be conservative and we were hopeful that the Comptroller General might rule in favor of more liberal allowances. The decision of May 2, 1958, however, will result in a reduction in the payments we had been making to some employees and will aggravate further the morale situation that has developed because of differences between overtime rates paid the Public Health Service employees compared with that paid to employees of other Government agencies performing similar inspectional duties. It also raises the question of the necessity of recovering a portion of payments already made. The problem of providing equality of treatment for all inspectional employees is complex and controversial. While I recognize that the legislation under which we operate was not intended to establish absolute parity between Public Health Service employees and employees of other agencies I do feel that in the light of the Comptroller General's decision it should be broadened to specifically authorize the following:

1. Computation of compensable overtime beginning with the time an employee is required to report to a quarantine station for the performance of overtime services and ending with the return to the station from the point of inspection upon completion of such services.
2. Payment of constructive overtime where it is more expeditious for the inspector to proceed from his home directly to the conveyance rather than to report to his official station prior to the inspection.
3. Payment covering a reasonable allowance of 2 hours during which the employee might be said to "remain on duty," in the nature of standby or

waiting time, prior to or between inspections although not engaged in the actual performance of overtime duties.

4. Validation of payments already made pursuant to administrative instructions. The Comptroller General has held that such instructions are ineffective so far as they authorize compensation for travel between headquarters and temporary duty station but has not made a determination with respect to recovery of such payments.

Thank you for your continued interest in the problems of the Public Health Service.

Sincerely yours,

L. E. BURNEY, *Surgeon General.*

LETTER FROM COMPTROLLER GENERAL

Senator HILL. During the course of the hearings on foreign quarantine activities, testimony revaled that the Comptroller General had been requested by the Secretary of Health, Education, and Welfare to rule on certain questions regarding rates of overtime compensation for foreign quarantine personnel. Since those hearings were concluded, the Comptroller has rendered his decision, a copy of which will be made a part of the record at this point. (Colloquy appears on p. 614.)

(The letter referred to follows:)

COMPTROLLER GENERAL OF THE UNITED STATES,
Washington 25, D. C., May 2, 1958.

The Honorable the SECRETARY OF HEALTH, EDUCATION, AND WELFARE.

DEAR MR. SECRETARY: On February 4, 1958, you requested our decision on several questions involving Public Law 85–58 which amends section 364 of the Public Health Service Act to provide for the payment of overtime compensation to employees of the Foreign Quarantine Division performing overtime duties during the nighttime and on Sundays and holidays. Such extra compensation with certain exceptions is required to be paid to the United States by the owner, agent, or other person in charge of the conveyance at whose request the overtime services are performed.

Three principal types of inspections are performed by employees of the Foreign Quarantine Division, namely: (1) Quarantine inspection, to prevent the introduction, transmission, or spread of communicable disease from foreign countries into the United States, pending completion of quarantine inspection, and unless specific permission is granted by the quarantine inspector, the vessel or aircraft, unless exempted, may not discharge cargo, disembark its passengers, or permit any person to come aboard; (2) medical examination of aliens; and (3) sanitation inspection, to determine the sanitary condition of the conveyance and the presence of vectors of quarantinable and other communicable diseases.

Conditions under which such inspections are performed vary widely. With few exceptions, staff or aircraft inspections are assigned from quarantine stations and are several miles from the airports. Ship inspections are performed either while the ship is in the stream or at the dock. Inspection in the stream requires transfer of personnel by launch between ship and shore, while dockside boarding requires waterfront travel. You say that the possibility of accident while transferring from launches to ships in darkness or near darkness, especially in rough weather, is considerably greater than in daylight, and that dockside boardings usually require travel into rough and lonely sections.

You also say that a high percentage of the overtime is of the call-back type, frequently during the hours normally allotted for sleep or rest; that such overtime, performed at the request and for the convenience of the carrier, although irregular as to time of occurrence, is a regular and frequent practice; and that because of the hours at which overtime services are requested and the isolated locations of the stations, public transportation is infrequent and travel may take much longer than during normal business hours.

You enclosed with your letter administrative instructions implementing Public Law 85–58. Under those instructions, overtime services, that is, service performed between 6 p. m. and 6 a. m. (or 7 p. m. and 7 a. m.), or on Sundays or holidays which do not fall within the employee's regularly scheduled daily tour of duty, begin when the employee has reported to the duty station having jurisdic-

tion of the conveyance and end when the employee completes the work connected with such services after his return to the station. Such overtime is computed on the daily basis without requiring that the employee perform services in excess of 40 hours during the administrative workweek.

You present several questions which have arisen concerning the allowance of compensable time at overtime rates additional to the period so computed, in accordance with the referred-to administrative instructions. The questions will be answered in the order presented.

"1. Having in mind your decision of October 24, 1957, B–132126, dealing with the computation of overtime for customs employees under 19 U. S. C. 267, 1451 (a statute with provisions comparable in many respects to section 364 (c) and (d) of the Public Health Service Act as amended) advice is requested whether your office would object to a reasonable allowance of two hours during which the employee might be said to 'remain on duty', in the nature of stand-by or waiting time, prior to or between inspections although not engaged in the actual performance of 'overtime duties * * * in connection with * * * inspection or quarantine treatment'? Such a period of compensable time would be included as part of the overtime services in addition to the period computed in accordance with the administrative instructions. Computation of such additional compensable time would, of course, be in accord with the views expressed in your cited opinion of October 24, 1957, as to the scope of so-called 'back-up time.' In this connection, your attention is invited to 27 Comp. Gen. 102, where a similar allowance was approved under the comparable provisions of the Act (8 U. S. C. 109) providing for overtime compensation for immigration inspectors.

Public Law 85–58 (71 Stat. 181) amends section 364 of the Public Health Service Act (42 U. S. C. 267) by adding thereto the following subsections:

"(c) Employees of the United States Public Health Service, Foreign Quarantine Division, performing overtime duties including the operation of vessels, in connection with the inspection or quarantine treatment of persons (passengers and crews), conveyances, or goods arriving by land, water, or air in the United States or any place subject to the jurisdiction thereof, hereinafter referred to as 'employees of the Public Health Service', when required to be on duty to perform such duties between the hours of 6 o'clock postmeridian and 6 o'clock antemeridian (or between the hours of 7 o'clock postmeridian and 7 o'clock antemeridian at stations which have a declared workday of from 7 o'clock antemeridian to 7 o'clock postmeridian), or on Sundays or holidays, shall be paid, in lieu of compensation under any other provision of law, at the rate of one and one-half times the basic hourly rate for each hour that the overtime extends beyond 6 o'clock (or 7 o'clock as the case may be) postmeridian, and two times the basic hourly rate for each overtime hour worked on Sundays or holidays. As used in this subsection, the term 'basic hourly rate' shall mean the regular basic rate of pay which is applicable to such employees for work performed within their regularly scheduled tour of duty.

"(d) (1) The said extra compensation shall be paid to the United States by the owner, agent, consignee, operator, or master or other person in charge of any conveyance, for whom, at his request, services as described in this subsection (hereinafter referred to as overtime service) are performed. If such employees have been ordered to report for duty and have so reported, and the requested services are not performed by reason of circumstances beyond the control of the employees concerned, such extra compensation shall be paid on the same basis as though the overtime services had actually been performed during the period between the time the employees were ordered to report for duty and did so report, and the time they were notified that their services would not be required, and in any case as though their services had continued for not less than one hour. The Surgeon General with the approval of the Secretary of Health, Education, and Welfare may prescribe regulations requiring the owner, agent, consignee, operator, or master or other person for whom the overtime services are performed to file a bond in such amounts and containing such conditions and with such sureties, or in lieu of a bond, to deposit money or obligations of the United States in such amount, as will assure the payment of charges under this subsection, which bond or deposit may cover one or more transactions or all transactions during a specified period: *Provided*, That no charges shall be made for services performed in connection with the inspection of (1) persons arriving by international highways, ferries, bridges, or tunnels, or the conveyances in which they arrive, or (2) persons arriving by aircraft or railroad trains, the operations of which are covered by published schedules, or the aircraft or trains in which they arrive, or (3) persons arriving by vessels operated between Canadian ports and ports on Puget Sound or operated on the Great Lakes and connecting waterways, the operations of which are covered by published schedules, or the vessels in which they arrive.

"(2) Moneys collected under this subsection shall be deposited in the Treasury of the United States to the credit of the appropriation charged with the expense of the services, and the appropriations so credited shall be available for the payment of such compensation to the said employees for services so rendered."

The language of subsection (c) providing that the overtime compensation shall be paid to employees "performing overtime duties * * * when required to be on duty to perform such duties" clearly contemplates the performance of actual duty during the prescribed overtime periods as a requisite for the overtime payments. While we have not questioned departmental regulations authorizing allowances of compensable "waiting" or "stand-by" time in addition to the time of actual overtime duty in the case of Customs Service employees and Immigration Service employees, the statutes governing overtime payments to those employees differ in a very significant respect from the statute here under consideration. Under 19 U. S. C. 267 and 5 U. S. C. 342c, the Secretary of the Treasury and the Attorney General, respectively, are directed "to fix a reasonable rate of extra compensation for overtime services" which language has been construed as conferring upon the department head very broad discretion in determining what constitutes overtime services thereunder. (*Callahan* v. *United States* (122 F. 2d 216; 22 Op. Atty. Gen. 112; 37 Comp. Gen. 276; 27 *id.* 102).) On the other hand, Public Law 85–58 merely provides that the Foreign Quarantine employees "shall be paid" the overtime and does not confer upon the Secretary of Health, Education, and Welfare any specific authority from which the aforesaid broad discretionary power could be inferred. Also, while the House of Representatives in H. R. 7221, which became Public Law 85–58, endeavored to adopt a provision which would have put the Quarantine Division on an overtime basis very similar to that of the Customs and Immigration Service, the Senate revised and modified the language of the bill. That modification was agreed to by the House and is now contained in Public Law 85–58. We find nothing in the legislative history of the language as adopted indicating that Congress intended it to have other than its clear and unambiguous meaning.

Therefore, we are required to object to the allowance of compensable overtime for periods when the employees are not engaged in the actual performance of overtime duties.

"2. Assuming the answer to the previous question is in the affirmative, may such reasonable allowance be made if the overtime services are performed for exempt carriers and hence not reimbursable? In our opinion, the considerations supporting such allowance are not affected by the circumstance as to whether the overtime compensation is reimbursable."

Since our answer to the previous question is in the negative no answer is required to this question.

"3. Because of the isolated location of many quarantine stations, it is sometimes more expeditious for the quarantine inspector to proceed from his home directly to the conveyance, whether it be a ship or an aircraft, rather than to report to the station prior to the inspection. Under such circumstances, may the period of overtime services be computed constructively, on a station to station basis, as though the employee had reported to the station prior to and on completion of the inspection? Overtime so computed is not intended to affect the reasonable period proposed to be allowed under question 1 for stand-by and waiting time."

Our decisions, regardless of the overtime statute involved, have consistently held that per annum employees are not entitled to overtime compensation for travel time outside their regularly scheduled tours of duty not involving the performance of work or carried out under arduous conditions (24 Comp. Gen. 456, and decisions there cited; *Cf.* sec. 204 of the Federal Employees Pay Act of 1945, 68 Stat. 1005). We particularly held such rule applicable to Customs Service employees in 37 Comptroller General Decisions 356 and to Foreign Quarantine Division employees in decision of September 24, 1947, B–67600. While the rule respecting travel overtime is somewhat more liberal concerning wage board employees whose wages are fixed pursuant to the act of March 28, 1934 (48 Stat. 509), such interpretation is based upon the provisions of that act. Since the overtime compensation payable under Public Law 85–58 is in lieu of compensation under any other provisions of law, we view the general rule as set forth above as controlling even in the case of wage board Quarantine Division employees. Also, we do not view the travel of Quarantine Division employees from residence to headquarters or from headquarters to temporary duty stations, generally, as carried out under arduous conditions or involving the performance of work. Of course, certain segments thereof, such as the time spent transferring from launch to ship, properly could be so classified. Thus, we conclude that neither per

annum nor wage board Quarantine Division employees may be paid overtime compensation for mere travel between their headquarters and temporary duty stations and that your administrative instructions are ineffective so far as they authorize such payments. Therefore, the question is answered in the negative.

"4. Section 364 (d) of the Public Health Service Act (as amended by Public Law 85–58), provides that if the quarantine employees 'have been ordered to report for duty and have so reported, and the requested services are not performed by reason of circumstances beyond the control of the employees concerned, such extra compensation shall be paid on the same basis as though the overtime services had actually been performed during the period between the time the employees were ordered to report for duty and did so report, and the time they were notified that their services would not be required, and in any case as though their services had continued for not less than 1 hour.'

"Under the exemptions provided in the statute, aircraft or trains 'the operations of which are covered by published schedules' are exempted from charges for overtime services.

"When the employee has been ordered to report for duty but services are not performed, the administrative instructions (paragraph 5 a (5)) provide that overtime compensation as authorized in the quoted language may be paid to the employee only if the carrier is liable for reimbursement. This construction is based on the decision in 10 Comp. Gen. 487, 491 involving the somewhat similar provisions of the Act of March 2, 1931, wherein it was held that such provision had no application to cases in which the Government is liable for the overtime. (When services are performed, however, the instructions provide that overtime shall be computed in multiples of one hour, and if the employee performs services in excess of fifteen minutes but less than one hour, the overtime is computed as one hour, regardless of whether the overtime compensation is reimbursable (see 25 Comp. Gen. 121)).

"Under the statutory provisions here involved, aircraft whose operations are covered by a published schedule have been considered exempt from charges for overtime service even though they land at a time and place not scheduled. For example, weather conditions may prevent aircraft from landing at a scheduled airport. In some cases, as many as four or five alternate airports are alerted and inspectional personnel at such airports are called back to duty between 6 p. m. and 6 a. m. (or on Sundays and holidays) to inspect the aircraft on arrival. They are required to remain on duty until all the aircraft involved have landed. In many cases, no landings are made at some of the alternate airports.

"Application of the holding in 10 Comp. Gen. 487, to this situation, where standby duty of several hours is required, appears a hardship on the employees involved, particularly in view of the callback provisions of the Federal Employees' Pay Act (5 U. S. C. 912a) which would otherwise be applicable.

"Accordingly, your advice is requested whether the view expressed in 10 Comp. Gen. 487, 491, is applicable to situations arising under section 364 (d) of the Public Health Service Act so as to preclude the payment of overtime compensation thereunder if the employee has reported for overtime duty as ordered but the requested services are not performed by reason of circumstances beyond the control of the employee and the carrier is exempted from reimbursement. If so, may compensatory time off be allowed to these employees?"

Our decision, reported in 10 Comp. Gen. 487, 491, which held that employees of the Immigration Service are not entitled to overtime compensation for time on duty when no actual inspection takes place for which the Government would not be reimbursed was based on the fact that authority for the payment of overtime when those employees have been ordered to report for duty but services are not performed is contained in section 2 of the act of March 2, 1931 (5 U. S. C. 342d) and that section is specifically made not applicable to exempt situations. However, while subsection (d) (1) of Public Law 85–58, which similarly authorizes the payment of overtime when employees have been ordered to report for duty but services are not performed contains a proviso "that no charges shall be made for services performed in connection with" certain specified situations, there is no language in the proviso excluding the application of the authority considered in this question from exempt situations Consequently, we view subsection (d) (1) as authorizing the payment of the overtime provided for in subsection (c) to employees who have been ordered to report for duty but services are not performed because of circumstances beyond their control, regardless of whether the exempt situations are, or are not, involved Therefore, the question is answered in the negative Compensatory time off could not be allowable in any event, since Quarantine employees' rights regarding the overtime work here considered

are governed by Public Law 85–58 "in lieu of compensation under any other provision of law," and that act makes no provision for compensatory time off.

Sincerely yours,

JOSEPH CAMPBELL,
Comptroller General of the United States.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

ST. ELIZABETHS HOSPITAL

STATEMENTS OF DR. WINFRED OVERHOLSER, SUPERINTENDENT, ACCOMPANIED BY DR. ADDISON M. DUVAL, ASSISTANT SUPERINTENDENT, F. M. HALL, BUDGET OFFICER; AND JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

"*SALARIES AND EXPENSES*

"[Salaries and expenses:] For expenses necessary for the maintenance and operation of the hospital, including *purchase of one passenger motor vehicle,* clothing for patients, and cooperation with organizations or individuals in the scientific research into the nature, causes, prevention and treatment of mental illness, [$3,085,800,] *$3,154,000.*"

Amounts available for obligation

	1958 appropriation	1959 estimate	1959 House allowance
Direct appropriation	$3,085,800	$3,154,000	$3,154,000
Reimbursements:			
Other accounts	1,047,462	1,071,070	1,071,070
Non-Federal sources	11,536,238	11,793,930	11,793,930
Total available	15,669,500	16,019,000	16,019,000

Obligations by activities

	1958 appropriation		1959 estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Operation and maintenance of hospital	2,684	$15,308,695	2,740	$15,616,730	2,740	$15,616,730
2. Operation of farm	8	35,145	8	35,205	8	35,205
3. Operation of cafeteria	14	100,720	14	100,845	14	100,845
4. Training program	[1] 11	224,940	[1] 11	266,220	[1] 11	266,220
Total obligations	2,717	15,669,500	2,773	16,019,000	2,773	16,019,000

[1] Permanent classified positions only. Amounts shown also cover unclassified intern, resident, and student nurse trainees totaling 140 in 1958 and 152 in 1959.

Obligations by objects

	1958 appropriation	1959 estimate	1959 House allowance
Total number of permanent positions	2,717	2,773	2,773
Full-time equivalent of all other positions	77	89	89
Average number of all employees	2,697	2,740	2,740
Number of employees at end of year	2,773	2,816	2,816
01 Personal services	$11,184,170	$11,426,325	$11,426,325
02 Travel	2,450	2,450	2,450
03 Transportation of things	3,100	3,100	3,100
04 Communication services	16,500	16,500	16,500
05 Rents and utility services	126,200	126,200	126,200
06 Printing and reproduction	14,950	14,950	14,950
07 Other contractual services	107,600	108,420	108,420
08 Supplies and materials	3,437,720	3,511,750	3,511,750
09 Equipment	210,000	210,000	210,000
11 Grants, subsidies, and contributions: Contribution to retirement fund	630,000	668,170	668,170
13 Refunds, awards, and indemnities	7,100	2,300	2,300
15 Taxes and assessments	4,400	4,400	4,400
Subtotal	15,744,190	16,094,565	16,094,565
Deduct charges for quarters, subsistence and laundry	−74,690	−75,565	−75,565
Total obligations	15,669,500	16,019,000	16,019,000

Summary of changes

	Positions	Amount
1958 actual appropriation	535	$3,085,800
Estimated reimbursements	2,182	12,583,700
Total new obligational authority for 1958	2,717	15,669,500
1959 appropriation request	546	3,154,000
Estimated reimbursements	2,227	12,865,000
Total new obligational authority for 1959	2,773	16,019,000
Net change requested:		
Direct appropriation	+11	+68,200
Reimbursements	+45	+281,300
Total net change requested	+56	+349,500

	1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount
Increases:				
For mandatory items: Retirement contributions annualization (rate of 6.5 percent in 1959 and 6.275 percent in 1958 for base positions)		$25,200		$25,200
For program items:				
Operation and maintenance of hospital:				
Medical and nursing staff increases	56	209,135	56	209,135
Increased cost of essential supplies		74,030		74,030
Training program: Expansion of intern and resident training		[1] 41,135		[1] 41,135
Total change requested	56	349,500	56	349,500

[1] Provides for 12 additional unclassified trainees.

New positions requested, fiscal year 1959

	Grade	Number of positions	Annual salary
Operation and maintenance of hospital:			
Medical officer	GS-12	3	$25,935
Clinical psychologist	GS-11	1	6,390
Assistant director of nursing services	GS-11	1	6,390
Clinical psychologist	GS-9	1	5,440
Supervisory social worker	GS-9	1	5,440
Psychodramatist	GS-9	1	5,440
Nurse instructor	GS-9	1	5,440
Assistant nurse supervisor	GS-9	1	5,440
Social service worker	GS-7	2	9,050
Pharmacist	GS-7	1	4,525
Occupational therapist	GS-7	2	9,050
Dental Technician	GS-6	1	4,080
Recreation leader	GS-5	3	11,010
Medical technician	GS-5	1	3,670
Clerk-dental	GS-3	1	3,175
Clerk-X-ray	GS-3	1	3,175
Barber	GS-3	1	3,175
Occupational therapy aid	GS-3	2	6,350
Nursing assistant	GS-3	30	95,250
Physiotherapy aid	GS-3	1	3,175
Total		56	221,600
Training program:			
Psychology intern	Unclassified	1	2,600
Psychology resident	do	1	3,100
Rotating medical intern	do	3	9,300
Surgical resident	do	1	4,500
Radiology resident	do	1	4,100
Pathology resident	do	2	9,000
Dental intern	do	1	3,100
Chaplain intern	do	1	2,800
Chaplain resident	do	1	3,100
Total		12	41,600
Total new positions, all activities		68	263,200

PREPARED STATEMENTS

Senator HILL. Dr. Overholser, we will be glad to have you proceed in your own way.

Dr. OVERHOLSER. Mr. Chairman and members of the committee: I have prepared formal opening statements covering in some detail the budget requests of St. Elizabeths Hospital as submitted to and approved by the House of Representatives for fiscal year 1959. With your permission, I should like to insert these statements in the record in full and summarize them briefly at this time.

Senator HILL. We will be glad to insert them in full in the record.

(The statements referred to follow:)

STATEMENT BY SUPERINTENDENT, ST. ELIZABETHS HOSPITAL

Mr. Chairman and members of the committee: I should like to describe briefly the program objectives and appropriation increases for St. Elizabeths Hospital as covered in the 1959 budget requests now before the committee. For the benefit of the committee, I shall preface my statement with a few facts on the history and functions of the hospital.

HISTORY AND FUNCTIONS

St. Elizabeths Hospital was established by the act of March 3, 1855, as the Government Hospital for the Insane. It became St. Elizabeths Hospital by the act of July 1, 1916. The hospital provides care and treatment for several classes of mentally ill persons, including those residing in the District of Columbia, beneficiaries of the Veterans' Administration, Public Health Service, insane persons charged with or convicted of crimes in the United States courts, including

the courts of the District of Columbia, certain United States citizens found insane in Canada, the Canal Zone, and the Virgin Islands, certain Foreign Service personnel, and members of the military admitted prior to July 16, 1946.

Funds for the operation of the hospital are obtained through a direct appropriation covering most of the Federal beneficiaries and by reimbursements for care rendered other groups, principally residents of the District of Columbia.

DISTRICT OF COLUMBIA PARTICIPATION IN BUDGET FORMULATION

It would seem pertinent at this point to advise the committee that the District of Columbia, as a major source of revenue in the financing of hospital operations, has participated in the formulation of the 1959 budget requests of St. Elizabeths Hospital. This is in accordance with wishes of the House Appropriations Committee as expressed in its report (No. 217, dated March 21, 1957) on the 1958 appropriation. The hospital is pleased to report that the District, despite pressing hospital problems of its own, recognizes the need for, and approves of, the increases requested by St. Elizabeths Hospital in 1959.

POLICIES AND PROGRAMS

The statutory duty of St. Elizabeths Hospital is to furnish the most humane care and enlightened curative treatment to the mentally ill. The hospital's policies and programs are all directed to this end. The fulfillment of the obligation, however, has become exceedingly difficult in recent years for reasons set forth in detail in justifications which follow. Additional funds requested in this budget represent an effort on the part of the hospital to acquire some of the increases in manpower and material needed to accomplish the objective.

1959 INCREASES

The 1959 budget provides for a total increase of $349,500 ($68,200 in direct appropriation and $281,300 in reimbursements) over estimated funds available in the current fiscal year from the 1958 appropriation and anticipated reimbursements. The additional funds will provide principally for (1) a minimal part of an urgently needed increase in staff, (2) relatively minor increases in supply funds to cover higher food prices and increased requirements for drugs, medicines, and medical supplies, and (3) annualization of the cost of mandatory contributions to the civil service retirement fund.

PATIENT LOAD

Requirements for 1959 are based on an anticipated patient load of 7,030, a continuation of the level projected for the current fiscal year. It is the opinion of the staff that the patient population of St. Elizabeths Hospital will remain at substantially this level for several years, a belief substantiated to some extent by the actual average load for the current year to date which has deviated less than one percent from the estimate made over a year ago.

PERSONAL SERVICES

The most pressing problem of the hospital today is staffing. A continuing and mounting personnel shortage has existed for some time but the problem has increased greatly in the last few years due to advances in psychiatric knowledge which have changed considerably the care and treatment programs of progressive mental hospitals.

Adjustments in recent years in personal service funds have been generally inadequate to overcome the increasing burden placed on the hospital by the changing nature of the patient population—notably the constantly increasing average age of patients and major changes in treatment techniques and requirements. Modern drugs, particularly the tranquilizing drugs, have changed the general atmosphere of the psychiatric ward. Patients previously unapproachable are now more amenable to modern psychiatric treatment techniques. With greatly increased awareness and calmness they are much more in need of attention and are desirous of participating in activities in which it was not previously possible for them to engage.

Today there is less requirement for mere custodial-type care but much more demand for geriatric nursing and for active therapeutic programs. Substantially more staff is required to carry out these programs—programs which enhance the mental patients' chances of recovery.

A proposal for staff increases in 1958 was rejected by the Congress. The House committee, in its report, expressed doubt as to the need for an increase in personnel in face of a possible decline in patient load. As previously stated, the hospital believes the load will stabilize at approximately the level estimated for 1958 and 1959. Even if this were not true, it is the opinion of the hospital that changes in treatment methods and increases in the average age of patients much more than counterbalance minor decreases in population.

The hospital has made extensive analyses of its staffing requirements which show substantial increases are necessary for a fully adequate care and treatment program. The staffing needs were discussed thoroughly with the District of Columbia, resulting in recognition of the fact that the most urgent deficiencies should be corrected immediately. The increases proposed for 1959 reflect this agreement and represent a request for additional staff in those areas where current shortages are obviously serious. In addition, a group of well-qualified consultants was engaged to furnish an objective, realistic appraisal of the study and to report its findings and recommendations. The report of the group was just recently received, supporting in general the hospital's estimate of total staffing inadequacies.

Pending final review and evaluation of the consultants' findings, which the hospital hopes to use in subsequent budget submissions, a minimum increase of 56 permanent medical positions is urgently requested in fiscal year 1959 to furnish some immediate relief in the most critical problem areas. The requested increase is of such a high priority as to be included in this budget despite a government-wide budgetary policy in 1959 of fiscal restraint and continuation at or below current levels. The hospital also proposes to expand its training program by the addition of 12 intern and resident trainee positions. The training of the interns and residents will benefit the medical profession at large, but of more immediate importance to the hospital, it will provide at least some additional "in-training" personnel for relief of our presently overburdened professional staff.

The proposed new positions, after lapses for anticipated delays in filling, would normally permit an increase of approximately 63 in average employment. The increase, however, will be partially offset by an estimated 20 man-years which will be required for the absorption of exceptionally heavy within-grade salary advancements in 1959. The abnormally high cost of salary advancements results from the general reallocation of nurse and nursing assistant positions during the past year which raised the salary ceiling for many employees previously at the top of their salary range. The net increase in average employment in 1959 over 1958 will thus be approximately 43. Without the increase in funds requested in this budget, the hospital would be forced to operate in 1959 with a staff of 20 less than authorized for the current year.

BUDGET FORMULATION

Dr. OVERHOLSER. It would be pertinent at this point, I believe, to inform the committee that the District of Columbia has participated in hearings and discussions on the formulation of the 1959 budget of St. Elizabeths Hospital and concurs fully with the increases which it provides.

Senator HILL. The House gave you the full budget estimate?

Dr. OVERHOLSER. Yes, sir.

SALARIES AND EXPENSES

The 1959 budget for salaries and expenses provides for an increase of $68,200 in the direct appropriation and $281,300 in reimbursements, a total of $349,500 over the amounts available in the current fiscal year. The additional funds will (1) permit an increase in average employment of approximately 43 medical positions, providing partial relief for the most critically understaffed areas, (2) cover higher food costs and increased requirements for drugs, medicines, and medical supplies, and (3) provide for annualization of the cost of mandatory contributions to the civil service retirement fund.

The estimates, based on an anticipated average daily patient load of 7,030, result in a patient day cost of $6.216.

Major Repairs and Preservation of Buildings and Grounds

APPROPRIATION ESTIMATE

"Major Repairs and Preservation of Buildings and Grounds

"[Major repairs and preservation of buildings and grounds:] For miscellaneous construction, alterations, repairs, and equipment, on the grounds of the hospital, including preparation of plans and specifications, advertising, and supervision of construction, [$55,000] *$87,000,* to remain available until June 30, [1959: *Provided,* That any part of this amount may be transferred to the General Services Administration] *1960.*"

Amounts available for obligation

	1958 appropriation	1959 estimate	1959 House allowance
Appropriation	$55,000	$87,000	$87,000
Unobligated balance from prior years	76,022		
Total available	131,022	87,000	87,000

Obligations by activities

	1958 appropriation	1959 estimate	1959 House allowance
Building repairs and improvements	$39,232	$52,000	$52,000
Ground maintenance and improvements	262		
Utility facilities, repairs, and improvements	89,612	35,000	35,000
Total obligations	129,106	87,000	87,000
Unobligated balance no longer available (reserve for savings)	1,916		
Total obligations and balance	131,022	87,000	87,000

Obligations by objects

	1958 appropriation	1959 estimate	1959 House allowance
06 Printing and reproduction	$700	$500	$500
07 Other contractual services	22,967	86,500	86,500
10 Lands and structures	105,439		
Total obligations	129,106	87,000	87,000

Summary of changes

	Positions	Amount
1958 actual appropriation		$55,000
Deduct nonrecurring fiscal year 1958 projects:		
1. Preliminary plans for remodeling and extension of administration building		−5,600
2. Replacement of freight elevator, general kitchen		−15,000
3. Increase electrical facilities in continued treatment kitchen		−15,000
4. Rewiring and extension of electrical facilities in patient buildings		−19,400
Revised 1958 base		0
1959 appropriation request		87,000
Net change requested		+87,000

Summary of changes—Continued

	1959 budget estimate	1959 House allowance
Increases for program items:		
1. Replacement of roof, center building	$52,000	$52,000
2. Rewiring and extension of electrical facilities in patient buildings	35,000	35,000
Total change requested	87,000	87,000

STATEMENT OF SUPERINTENDENT, ST. ELIZABETHS HOSPITAL

Mr. Chairman and members of the committee, funds requested for major repairs and preservation of buildings and grounds at St. Elizabeths Hospital for 1959 total $87,000, an increase of $32,000 over the amount appropriated for the purpose in 1958 but substantially under the average annual major repair costs of the hospital. The request covers the following two projects which are part of a conservative program of repair and restoration of hospital facilities:

Replacement of roof, center building.

Rewiring and extension of electrical facilities in patient buildings.

In accordance with the provisions of Public Law 472, 83d Congress, an estimated amount of $64,000 will be collected from the District of Columbia and deposited into the Treasury to the credit of miscellaneous receipts as the District's share of major repair costs at St. Elizabeths Hospital for 1959.

District officials have examined the areas involved and concur in the urgency of the proposed projects.

AMOUNT REQUESTED

An amount of $87,000, an increase of $32,000 over the 1958 appropriation, is requested for continuation of a conservative program of repair and restoration of hospital facilities. The amount requested will provide funds for two essential projects—replacement of the roof on center building and rewiring and extension of electrical facilities in patient buildings.

CONSTRUCTION, CONTINUED TREATMENT BUILDING

APPROPRIATION ESTIMATE

"*CONSTRUCTION, CONTINUED TREATMENT BUILDING*

"*For expenses necessary for the preparation of preliminary plans for a continued treatment building at Saint Elizabeths Hospital, $125,000, to remain available until June 30, 1960.*"

Amounts available for obligation

	1958 appropriation	1959 estimate	1959 House allowance
Appropriation (total available)	0	$125,000	$125,000

Obligations by activity

	1958 appropriation	1959 estimate	1959 House allowance
Design, supervision, etc. (total obligations)	0	$125,000	$125,000

Obligations by objects

	1958 appropriation	1959 estimate	1959 House allowance
06 Printing and reproduction	0	3,000	3,000
07 Other contractual services	0	122,000	122,000
Total obligations	0	125,000	125,000

Summary of changes

	Positions	Amount
1958 actual appropriation		0
1959 appropriation request		$125,000
Net change requested		+125,000

	1959 budget estimate	1959 House allowance
Increases for program items: Preliminary planning funds	$125,000	$125,000

STATEMENT BY SUPERINTENDENT, ST. ELIZABETHS HOSPITAL

Mr. Chairman and members of the committee, an amount of $125,000 is requested in 1959 for the preparation of preliminary plans for a 450-bed continued treatment building to be constructed on the grounds of St. Elizabeths Hospital.

The proposed new structure, part of a long-range program of replacement of antiquated treatment facilities, will replace three smaller buildings constructed during the period 1853–72 which are now structurally and physically inadequate to present-day requirements for effective care and treatment of psychiatric patients.

Total cost of the new facility is estimated at $6,750,000. A proportionate share of this cost will be borne by the District of Columbia pursuant to the provisions of Public Law 472, 83d Congress. Officials of the District government have surveyed the condition of the old buildings involved and concur fully in the need for replacement. The District's share, estimated at $4,995,000, will be collected over a period of not exceeding 40 years, beginning with the fiscal year following completion of construction. The amount thus collected will be deposited in the Treasury to the credit of miscellaneous receipts.

AMOUNT REQUESTED

An appropriation of $125,000 is requested in 1959 for the preparation of preliminary plans for a 450-bed continued treatment building, total estimated cost of which is $6,750,000. The proposed new structure, part of a long-range program of replacement of antiquated treatment facilities, will replace three smaller buildings constructed during the period 1853–72 which are now seriously overcrowded and structurally inadequate to present-day requirements.

The new facility will permit the hospital to furnish proper care and treatment to patients now housed in substandard areas.

Senator HILL. Some of these facilities are a little bit ancient?

Dr. OVERHOLSER. A little bit. Some are old buildings, may I say, which really are very good. These particular ones, however, are old, poorly planned, and quite inadequate.

Senator HILL. Doctor, do you think if we provide the amount recommended by the Budget, that that would be sufficient money for you to carry on in an adequate way the work there of your hospital?

PERSONNEL NEEDS

Dr. OVERHOLSER. I think for the present, at least, sir. We have had a survey made, I should say, which indicates that really, ultimately, we would require considerable additional personnel. We are not prepared at the moment, however, to ask for that.

Senator HILL. Have you submitted any request to the budget for that additional personnel as yet?

Dr. OVERHOLSER. Not as yet. That, we hope, will go in soon, in the 1960 budget, which is in the process of preparation now.

Senator HILL. You have a great hospital and you are doing a great work. I certainly would not want to see you crippled or your work impaired because you did not have the proper financial support, sir. You think that these funds, as recommended by the budget, and as approved by the House, will enable you to carry on adequately?

Dr. OVERHOLSER. Yes, sir. That is with particular reference, of course, to the current day-to-day operations.

Senator HILL. I understand. I am speaking now of the present time.

Dr. OVERHOLSER. Yes. Ultimately, of course, we have plans for further construction that perhaps we will have to await.

Senator HILL. We are thinking now, of course, of the next fiscal year which will run from this July 1 to the following July 1.

Dr. OVERHOLSER. Yes.

WORK UNDER COURT ORDERS

Senator HILL. Doctor, I think we have seen something in the papers about certain court orders. Are you having any trouble about these court orders that we could do anything about?

Dr. OVERHOLSER. We have troubles of one sort and another, Mr. Chairman. The fact remains that several years ago the Congress authorized a new maximum security building with a capacity of more than twice that of our present maximum security. That is well along. It is bricked in. We hope to have it opened about a year from July. That should relieve the situation then. In the meantime, we are making plans to prepare another ward for intermediate security. So I have hopes that within perhaps the next 2 or 3 months we can relieve, very substantially, the backlog of patients who now unfortunately have to be held at the General Hospital or in the jail even though ordered to St. Elizabeths while under criminal charges. That has to do only with the prisoners.

Senator HILL. You then find yourself in a very unfortunate, very unhappy situation of having been ordered to do something and not having the facilities with which to carry out the order, is that right.

Dr. OVERHOLSER. Yes, sir. That is a somewhat awkward situation to be in, to put it mildly.

Senator HILL. I can imagine so. But, anyway, what you said is that that situation is, you think, being cured, or will be cured shortly on a temporary basis, then more permanently in a little while?

Dr. OVERHOLSER. In a little over a year, it will be permanent enough to hold us for several years. The trend in the courts, I may add, is toward increasing the number of persons committed for mental observation, and I think that is all to the good in the long run It indicates a growing grasp by the courts of the fact that there is a fair

number of persons, at least of persons charged with crime, that ought at least to be investigated mentally before they are put on trial.

Senator HILL. Your hospital is very fine and what we want to do is support you and show our appreciation for the very fine, outstanding work you are doing.

Dr. OVERHOLSER. Thank you, sir, we are very grateful for your comment.

SOCIAL SECURITY ADMINISTRATION

STATEMENTS OF MR. CHARLES I. SCHOTTLAND, COMMISSIONER OF SOCIAL SECURITY

PREPARED STATEMENT

Senator HILL. Mr. Schottland, we are very glad to have you here with us.

Mr. SCHOTTLAND. Thank you, Senator Hill. We are very happy to be here. In the interest of time, I shall file my statement and forego any opening remarks.

Our presentations today do not involve any appeals on dollar amounts.

Senator HILL. Your statement will be filed for the record at this point.

(The statement referred to follows:)

STATEMENT BY COMMISSIONER OF SOCIAL SECURITY

My name is Charles I. Schottland. I am Commissioner of Social Security, and I would like to make a few general statements in connection with the detailed consideration which you will give to the budget requests of the various bureaus of the Social Security Administration. These requests will be discussed in detail by the bureau directors. However, I shall be available for any questions which the committee may have in the course of their presentation. At this particular time, I would like to comment on a fee matters where changes have occurred since we last appeared before this committee.

RESPONSIBILITIES OF SOCIAL SECURITY ADMINISTRATION

Through the four bureaus, which are the operating units of the Social Security Administration, we carry responsibility for the efficient, economical, and purposeful administration of public assistance grants, the old-age, survivors, and disability insurance program, the program of grants for maternal and child health and welfare and related services for children, research in child life, and supervision of federally chartered credit unions. Likewise, the Commissioner is responsible for the supervision of the Office of the Appeals Council which makes final administrative decisions on disputed old-age, survivors, and disability insurance claims; direction of the Office of the Actuary; serving as Secretary to the Board of Trustees of the Old-Age and Survivors Insurance Trust Fund and the Federal Disability Insurance Trust Fund; and serving as Chairman of the Advisory Council on Social Security Financing established by the 1956 amendments to the Social Security Act.

DYNAMIC NATURE OF PROGRAMS AND RECENT PROGRAM TRENDS

The programs which we administer touch the lives of almost every person in the United States. They are dynamic and evolving programs and constantly present us with new problems and new situations. The amount of interest in social security can be illustrated by the fact that there are now pending before the Congress more than 450 bills which would amend the Social Security Act. Many of these bills required substantial consultation prior to their introduction, many require extensive reports at the request of the committees, and a lesser number have or will require testimony before or consultation with the substantive committees of Congress. This all reflects itself in a very substantial workload impact upon the Office of the Commissioner and the operating bureaus.

Furthermore, when we appeared before you last year, the Congress had only recently enacted the 1956 amendments to the Social Security Act. Accordingly, we had only partially felt their impact upon our operations. How the 1956 amendments have affected our operations in the past year will be gone into in some detail by the bureau directors when they testify in behalf of their individual appropriations. I will at this time merely illustrate some of the developments which have occurred in our programs in the past year.

For example, in February of 1957 there were on the rolls of the old age and survivors insurance program 9,387,000 beneficiaries. As of February 1958, this total had increased to 11,322,000, an increase of almost 2 million. Monthly benefits in February 1957 were $498 million while benefits in February 1958 had increased to $620 million, or by $122 million.

In February 1957 there were 2,509,000 persons receiving old-age assistance under the public-assistance program. This figure in February 1958 had decreased to 2,475,000 despite the fact that the total number of aged in the population had increased about 1,000 aged persons a day. This reduction was due primarily to the fact that more and more aged persons are being covered by the old-age and survivors insurance program. In fact, this year for the first time more than 50 percent of the aged population will receive old-age and survivors insurance benefits. In June 1957 there were 524 aged old-age, survivors, and disability insurance beneficiaries per 1,000, age 65 and over, in the United States, while there were only 168-old-age-assistance recipients per 1,000 in the aged population. At present about 1 out of 4 old-age assistance recipients are also receiving old-age and survivors insurance benefits.

When we last appeared before you, we had not yet begun to pay disability benefits under the old-age and survivors insurance program. By January 1958 there were 159,000 such beneficiaries on the rolls receiving benefits having a monthly value of $12 million. As of November 1957, 26,000 childhood disability benefits had been awarded. Effective November 1956, the retirement age for women was reduced from age 65 to 62. As of November 1957, 959,000 women between the ages of 62 and 64 had been awarded benefits.

Since our last meeting with the committee, the permanently and totally disabled program has expanded. The States of California and Texas have adopted new programs of aid to the permanently and totally disabled in the last year and there are now 48 jurisdictions having such programs. Alaska, Arizona, Indiana, Iowa, and Nevada are not expected to have programs in 1959.

In the aid to dependent children program, the number of recipients in February 1957 was 2,326,000 and in February 1958, 2,588,000, an increase of 262,000 recipients. This increase results from an increase in the number of children in the population and a rise in the number of families broken by divorce, separation, or desertion or headed by an unwed mother. As Mr. Roney will point out in his statement, the old-age and survivors insurance program has very substantially reduced the need for public assistance among children whose fathers are dead, and the great bulk of children who now need assistance are those with parents who are physically or mentally handicapped, divorced, separated, or unmarried—groups that are not eligible under the old-age and survivors insurance program to receive insurance benefits.

As of July 1, 1957, there were a total of 59 million children in the United States under 18 years of age. During the past year, about 11,500 babies were born each day, resulting in a net increase from July 1, 1956, to June 30, 1957, of 2 million children under 18 years of age. The increase in our child population has, of course, been of importance to the Children's Bureau, the Bureau of Public Assistance, and the Bureau of Old-Age and Survivors Insurance, all of which have programs serving children.

Another development of considerable interest is the public assistance medical care program. As of March 31 of this year, 39 State public assistance agencies in 37 States had submitted plans to provide medical care payments authorized by the 1956 amendments to the Social Security Act. Many of these plans presented serious and complex policy problems. However, the effect of the amendment has clearly been to give better medical care to the 5 million recipients of public assistance.

ADMINISTRATIVE COSTS IN PUBLIC ASSISTANCE PROGRAMS

I would like to assure the committee that we took very seriously congressional comments made in connection with the 1958 appropriation bill in relation to administrative costs in the public assistance programs. Copies of a report which we have made on this subject have been transmitted to the committee, and we

will be glad to discuss its findings in whatever detail the committee desires at the time the budget estimates for grants to States for public assistance are being considered.

MENTAL RETARDATION AND SERVICES FOR CHILDREN OF MIGRATORY AGRICULTURAL WORKERS

We are happy to report that the estimate of expenditures for special projects in the field of mental retardation will exceed by almost $160,000 the $1 million that was earmarked by this committee for that purpose in the 1958 appropriation bill. In addition, the States will spend other maternal and child health funds for services for mentally retarded children. I am sure the committee will also be glad to know that in another area of its special interest several States have reported increases in health services for children of migratory agricultural workers. Mrs. Oettinger, the new Chief of the Children's Bureau, will report on these matters more fully in presenting our request for grants to the States for maternal and child welfare.

WHITE HOUSE CONFERENCE ON CHILDREN AND YOUTH

Mrs. Oettinger will also outline briefly the plans that we have for the White House Conference on Children and Youth in 1960. As you know, such a conference has been held every tenth year since 1909.

FINANCING OF SOCIAL SECURITY

As the committee is aware, the question of the financing of the social security system is frequently a subject of congressional and public discussion. In recognition of this, the 1956 amendments to the Social Security Act provided for the establishment of an Advisory Council on Social Security Financing. This Council, composed of outstanding citizens, has had two meetings to date. I am sure that the committee will be gratified, as we were, that such outstanding citizens have accepted this assignment which will make heavy demands upon their talents time, and energies. We are sure that the findings of the Council will weigh heavily with both the executive branch and the Congress in future consideration of social security financing.

ACCOMPLISHMENTS AND PENDING WORKLOADS

In reviewing this budget, I hope the committee may find cause for satisfaction with our accomplishments. We have faced a gignatic task with tremendous increases in our workload. In order to get the job done during the past year, we were forced to rely in many instances upon shortcuts and to adopt temporary expedients which were in some instances inappropriate for continuation. In some areas, also, I am deeply concerned about our inability to develop currency of operations. For example, the time required to develop and pay claims under the old-age and survivors insurance program and to hear appeals and render decisions is still substantially in excess of what we consider to be appropriate. In our public assistance program in the first 6 months of this year we received 2,746 amendments to State plans and at the present time have a backlog of over 1,000. We are doing everything possible to cope with these situations. For fiscal year 1959, we anticipate increases in our programs in many areas. Specifics will be presented as the bureaus discuss their 1959 budgets. The bureau directors will also discuss the effect on programs of any changes in the budget estimates made by the House.

HOUSE ALLOWANCE

Senator HILL. The House gave you the full budget estimates, did it not?

Mr. SCHOTTLAND. That is correct. The Bureau directors will discuss the details of the particular Bureau's estimates.

I would like to mention that we have a new face at these hearings. It is that of Mrs. Oettinger, the new Chief of the Children's Bureau.

Senator HILL. We are very happy to have her here.

Bureau of Old-Age and Survivors Insurance

STATEMENTS OF MR. VICTOR CHRISTGAU, DIRECTOR, BUREAU OF OLD-AGE AND SURVIVORS INSURANCE, AND MR. JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

"[Salaries and expenses, Bureau of Old-Age and Survivors Insurance:] For necessary expenses, not more than [$130,000,000] *$133,300,000* may be expended from the Federal old-age and survivors insurance trust fund: *Provided*, That such amounts as are required shall be available to pay the cost of necessary travel incident to medical examinations for verifying disabilities of individuals who file applications for disability determinations under title II of the Social Security Act, as amended.

"Advances to States, next succeeding fiscal year: For making, after May 31 of the current fiscal year, advances to States under section 221 (e) of the Social Security Act, as amended, for the first quarter of the next succeeding fiscal year, such sums as may be necessary from the above authorization may be expended from the Federal old-age and survivors insurance trust fund."

Amounts available for obligation

	1958 appropriation		1959 budget estimate		House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
Appropriation or estimate	21,773	$130,000,000	21,493	$133,300,000	21,493	$133,300,000
Supplemental appropriation	492	8,690,000				
Total appropriation or estimate	22,265	138,690,000	21,493	133,300,000	21,493	133,300,000

Obligations by activities

	1958 appropriation		1959 budget estimate		House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Maintenance of earnings accounts	4,655	$24,004,814	4,229	$23,348,205	4,229	$23,348,205
2. Processing OASI claims	9,123	58,016,445	9,123	53,679,916	9,123	53,679,916
3. Maintenance of OASI beneficiary rolls	3,560	18,500,545	3,610	19,330,474	3,610	19,330,474
4. Processing and disability claims and maintaining beneficiary rolls	2,396	22,550,978	1,926	19,653,967	1,926	19,653,967
5. Hearings and appeals	292	2,140,175	300	2,240,182	300	2,240,182
6. Actuarial services	15	103,136	15	108,528	15	108,528
7. Administration	2,224	13,373,907	2,290	14,938,728	2,290	14,938,728
Total obligations	22,265	138,690,000	21,493	133,300,000	21,493	133,300,000

Obligations by objects

Object classification	1958 appropriation	1959 budget estimate	House allowance
Total number of permanent positions	22,265	21,493	21,493
Full-time equivalent of all other positions	44	3	3
Average number of all positions	[1] 21,740	[1] 21,187	[1] 21,187
Number of employees at end of year	21,496	21,118	21,118
Average salaries and grades:			
General service grades:			
Average salary	$4,439	$4,542	$4,542
Average grade	5.6	5.8	5.8
01 Personal services	$103,756,791	$97,494,695	$97,494,695
02 Travel	2,878,250	2,725,169	2,725,169
03 Transportation of things	518,818	442,047	442,047
04 Communication services	1,794,409	1,828,771	1,828,771
05 Rents and utility services	9,782,097	10,529,752	10,529,752
06 Printing and reproduction	1,294,024	1,629,759	1,629,759
07 Other contractual services	1,003,103	983,757	983,757
Advances to States	8,900,000	8,500,000	8,500,000
08 Supplies and materials	1,324,580	1,545,344	1,545,344
09 Equipment	1,431,513	1,387,652	1,387,652
11 Grants, subsidies, and contributions	5,987,503	6,216,499	6,216,499
13 Refunds, awards, and indemnities	973	1,123	1,123
15 Taxes and assessments	17,939	15,432	15,432
Total obligations	138,690,000	133,300,000	133,300,000

[1] Excludes overtime as follows: 1958, 214; 1959, 130.

New positions requested, fiscal year 1959

	Grade	Number	Annual salary
Maintenance of earnings accounts: District manager	GS-11	2	$12,780
Processing OASI claims:			
Claims policy examiner	GS-11	1	6,390
District manager	GS-11	17	108,630
Claims supervisor	GS-9	2	10,880
Total		20	125,900
Maintenance of OASI beneficiary rolls:			
District manager	GS-11	3	19,170
Assistant chief of section	GS-10	6	35,490
Other	GS-6	10	40,800
Do	GS-1	2	5,380
Total		21	100,840
Processing disability claims and maintaining beneficiary rolls:			
Chief of section	GS-13	2	17,980
Disability policy examiner	GS-11	3	19,170
Disability reviewer	GS-11	3	19,170
District manager	GS-11	3	19,170
Disability examiner	GS-9	2	10,880
Total		13	86,370
Hearings and appeals:			
Member of the Appeals Council	GS-15	1	11,610
Hearing examiner referee	GS-14	2	20,640
Other	GS-6	2	8,160
Total		5	40,410
Administration:			
Social insurance research analyst	GS-12	2	$15,140
Analytical statistician	GS-11	2	12,780
Financial economist	GS-11	1	6,390
Health education officer	GS-11	1	6,390
Social insurance research analyst	GS-11	2	12,780
Management analyst	GS-9	1	5,440
Tabulation project planner	GS-9	1	5,440
Training officer	GS-9	1	5,440
Total		11	69,800
Total new positions, all activities		72	436,100

Summary of changes

	Positions	Amount
1958 actual appropriation	21,773	$130,000,000
1958 supplemental appropriation	492	8,690,000
Total appropriation	22,265	138,690,000
Deduct:		
Decrease of 7.9 percent in Bureau's workloads	198	6,726,170
Decrease of 11.1 percent in State workloads		768,400
Nonregularly recurring work performed in 1958	205	1,052,930
Decrease due to procedural improvements	313	1,033,336
Less accrued annual leave to be used in 1959	100	432,900
Increase in productivity in 1959	92	310,447
Decrease in cost of man-years due to less overtime in 1959		363,381
Nonrecurring and/or intermittent purchases		105,030
Miscellaneous changes	11	11,745
Revised 1958 base	21,346	127,385,661
1959 appropriation request	21,493	133,300,000
Net change requested	+147	+5,914,339

	1959 budget estimate		1959 House allowance	
	Position	Amount	Position	Amount
Increases for mandatory items:				
Retirement contributions annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)		$214,068		$214,068
Effect of civil service retirement due to changes in average salary and manpower requirements		96,090		96,090
Annualization costs for additional positions authorized in 1958		910,965		910,965
Within-grade promotions		982,776		982,776
Reclassifications		575,942		575,942
Promotion of trainees and other changes in average salary		209,552		209,552
Annualization of 1958 space changes		452,548		452,548
Price changes		130,642		130,642
Subtotal		3,572,583		3,572,583
For program items:				
Nonregularly recurring work scheduled for 1959	140	1,325,146	140	1,325,146
Strengthening and equipping the Bureau's employee health program	7	61,227	7	61,227
Purchase of additional medical examinations by State agencies		368,400		368,400
Additional space and space relocation requirements for 1959		289,541		289,541
Adjustments in printing inventories		297,442		297,442
Total changes requested	147	5,914,339	147	5,914,339

EFFECT OF HOUSE ACTION

The House has approved the full amount of $133,300,000 requested by the Bureau for fiscal year 1959. However, it inserted in title IX, general provisions of its approved bill a section 903, dealing with advances to States which is a matter of serious concern to the Bureau.

Section 903 limits the advances to States for the first quarter of the next succeeding fiscal year to the amount so advanced in the previous year. Under agreements made with the Department, the States act as agents of the Bureau in making determinations of disability under the disability insurance and freeze provisions of the Social Security Act. In May and June of each year, the Bureau advances funds to the States for the first quarter of the next succeeding fiscal year to insure uninterrupted operation. In view of the gradually increasing amount of followup work which the States will be called on to perform as the disability program matures the effect of section 903 would be to prevent the Bureau from advancing funds to State agencies in the first quarter commensurate with the workloads. The application of this section to the Bureau of Old-Age and Survivors Insurance appropriation would therefore create a serious problem and the Bureau therefore joins with the other organizational units of the Department in recommending its deletion.

BUDGET REQUEST AND HOUSE ACTION

Senator HILL. Mr. Christgau, we are glad to welcome you back. We are always glad to have one of my old colleagues back here again.

Mr. CHRISTGAU. Thank you. It is a pleasure to come before your committee, Mr. Chairman, and in order to conserve your time I will just make a brief statement bringing you up to date on the situation with reference to the 1959 appropriation request.

The House has already approved the full amount of $133,300,000 which the Bureau requested for fiscal year 1959. This amount is $5,390,000 less than the $138,690,000 appropriated for 1958. This budget estimate is based on estimates of the workloads which we will receive in fiscal year 1959 formulated in May and June of 1957 before the present economic recession. It is now clear that these workload estimates are substantially understated.

MINIMUM ADDITIONAL CLAIMS ESTIMATE

Now, the minimum additional receipts of claims based on optimistic economic assumptions, appear to be about 200,000.

Senator HILL. 200,000?

Mr. CHRISTGAU. Yes. Should the economic situation in 1959 turn out to be less favorable, the increased work to the Bureau will be substantially more. Since the budget before you is based on workload estimates made a year ago, that is, before the economic recession, consideration is being given to how much in additional funds will be required.

APPEALED DECISIONS ON DISABILITY CLAIMS

Senator HILL. I understand that the 1956 amendments to the Social Security Act resulted in a very heavy initial receipt of disability claims. Has this also had the effect of increasing the number of appealed decisions on disability claims?

Mr. SCHOTTLAND. Yes, sir. We have had approximately a 400-percent increase in the total pending appeals load since March 1956. The bulk of this increase is in disability cases.

Senator HILL. How do you propose to handle your backlog of cases?

Mr. SCHOTTLAND. Since it is a one-time workload which will continue for approximately the next year and a half to 2 years, we are faced with a real recruiting problem. Our hearing examiners must be appointed under the Administrative Procedure Act which prohibits the making of temporary appointments. Based upon the 1959 workloads, we will need about 165 full-time referees; however, our staffing requirements in subsequent years are expected to decline to about 100 referees. Thus, the logical approach to this problem would be to obtain persons on a temporary basis to perform hearings during this peak period. In order that these persons could be fully effective they should possess program background which would enable them to assume the full responsibility of the hearing examiner position with a minimum of training. The best solution would therefore be to obtain from the Bureau of Old-Age and Survivors Insurance persons with the necessary background who could assume temporary positions as hearing examiners. However, this cannot be done under the Administrative Procedure Act.

AUTHORITY NEEDED

Senator HILL. What authority would you need to do what you would like to do?

Mr. SCHOTTLAND. Well, authority to make temporary appointments without regard to the Administrative Procedure Act.

Senator HILL. Will you please furnish Mr. Downey with the necessary appropriation language to accomplish what you desire.

Mr. CHRISTGAU. We will be glad to do so.

BALTIMORE BUILDINGS

Senator HILL. I guess you folks will be mighty glad when your new building is completed in Baltimore.

Mr. CHRISTGAU. Yes, sir.

Senator HILL. How many buildings do you currently occupy in Baltimore?

Mr. CHRISTGAU. Eleven.

Senator HILL. Who currently is responsible for custodial, maintenance, and guard service in those 11 buildings?

Mr. CHRISTGAU. As I recall it, the General Services Administration is responsible for about 20 percent while the Bureau and lessors provide the remainder.

FINANCING OF SERVICES

Senator HILL. How are the services financed?

Mr. CHRISTGAU. We obtain appropriations for all such services including rentals and make appropriate payments to the General Services Administration upon receipt of bills from them.

Senator HILL. How do you propose to service your new building which is currently under construction?

Mr. CHRISTGAU. The present plan is for the General Services Administration to service the building.

Senator HILL. Did you make that decision or was it made by the General Services Administration?

Mr. CHRISTGAU. The decision was made by the Bureau of the Budget which has the authority to make decisions in this area.

Senator HILL. How did the matter come to the attention of the Bureau of the Budget?

Mr. CHRISTGAU. We recommended to the Bureau of the Budget that we be given the responsibility, but the decision reached was against us.

Senator HILL. But you would still, in any event, assume the budgetary and financial responsibility for the service?

Mr. CHRISTGAU. Yes, sir; our negotiations with the General Services Administration have been along those lines.

ECONOMIES IN CHECKWRITING

Senator HILL. Mr. Christgau, when you appeared before us last year, we discussed the economies that were being effectuated through the Bureau of Old-Age and Survivors Insurance writing its own checks in Birmingham. We were informed at that time that a committee made up of representatives of the General Accounting Office, the

Bureau of the Budget, and the Treasury Department was studying the further delegation of checkwriting to several Government agencies including your own. Has the study group completed its work on this subject?

Mr. CHRISTGAU. Yes, sir. A report was issued by the study group on December 18, 1957.

Senator HILL. What did the report recommend?

Mr. CHRISTGAU. The report recommended that the disbursing function be retained by the Disbursing Office of the Treasury Department.

Senator HILL. Did they then conclude that the Bureau of Old-Age and Survivors Insurance could not effectuate savings through writing its own checks?

Mr. CHRISTGAU. No, sir. The report indicated that we would be able to save approximately $1 million a year to the trust funds through writing our own checks; but that the total cost to the Government would be about $150,000 less under the continued centralized system of checkwriting.

Senator HILL. That would demonstrate that the Treasury Department needs your volume of checkwriting to justify continued centralization without increasing cost of checks for other agencies, would it not?

Mr. CHRISTGAU. That is one of the conclusions we reached from the report.

Senator HILL. How would the service rendered beneficiaries compare under the two alternatives?

Mr. CHRISTGAU. The report did not comment on that point. Our experience in Birmingham, however, has convinced us that we can render better service if we write our own checks.

Senator HILL. What is proposed with relation to the current checkwriting function in Brimingham? Will you continue to perform the function or will it be returned to Treasury?

Mr. CHRISTGAU. We have received a letter from the Treasury Department suggesting that the function be returned to them. We have not yet responded to their letter.

Senator HILL. But wouldn't it be a good idea to continue the disbursing of OASI checks by the area office at Birmingham?

Mr. CHRISTGAU. From our standpoint, we would think so since it would permit on a continuing basis a comparison of the advantages of centralized disbursing by Treasury versus the advantages of combined accounting and disbursing functions by another department. Apparently, the Treasury Department does not share our view on this since otherwise they would not be suggesting that the function be returned to them.

PREPARED STATEMENT

Mr. Chairman, I would like to present a more detailed statement for the record and if the committee should desire any additional information, I would be glad to supply it.

Senator HILL. We would be happy to have you submit that more detailed statement for the record, and it will be placed in the record at this point, and if there are any more questions that we would like to ask of you, we will submit them to you. You can prepare the

answers for us, and we will be sure then to have them here for our record.

Mr. CHRISTGAU. Thank you. I will be very glad to do that.

(The statement referred to follows:)

STATEMENT BY DIRECTOR, BUREAU OF OLD-AGE AND SURVIVORS INSURANCE

In presenting the needs of the Bureau for fiscal year 1959, it would be helpful to show how our plans for administration in 1959 grow out of the Bureau's experience in the last several years, particularly our experience with the series of major amendments beginning in 1950. To put 1959 in proper perspective and to give a sure feeling of where we are now and where we hope to be in fiscal year 1959, this statement will have to be somewhat longer than is usual.

OASI PROGRAM AND FINANCING

Old-age and survivors insurance is really three programs: A retirement system for retired workers and their dependents; a survivors insurance system for the dependents of workers who die; and a disability insurance system for those who are unable to engage in substantial employment after age 50 by reason of severe disabilities.

The statutory basis for the program is title II of the Social Security Act of 1935 revised by major amendments in 1939, 1950, 1952, 1954, and 1956. Under the program, people in covered employment and the self-employed make tax contributions during their working years to provide insurance protection for themselves and their families.

Payments to beneficiaries and administrative expenses of the program are paid from the old-age and survivors insurance trust fund and from the disability insurance trust fund. Benefit payments are made directly from the trust funds under continuing authority. Administrative expenses are authorized for expenditure from the trust funds each year by the Congress. The funds authorized for expenditure to defray the cost of administration of this program are therefore not a part of the Federal budget.

A YEAR AGO WE EXPECTED A RETURN TO MORE NORMAL OPERATING CONDITIONS IN FISCAL YEAR 1958

A year ago, April 10, 1957, when we appeared before this committee and submitted our appropriation request for fiscal year 1958, we looked forward to a return to more nearly nornal operations in that year and a continuation of more normal conditions into fiscal year 1959. We had come through, starting with the time of the 1950 amendments, a period of very rapid change and great growth in program caused by a succession of major amendments to the law, each one bringing huge peak workloads and complicated new provisions to administer. During this period we were given the difficult jobs—the ones considered too tough to tackle in the earlier days of the program. We now have the job of administering coverage of those who were once considered too difficult to be included—the self-employed, farmers, household workers, agricultural workers, State and local employees, nonprofit employees, ministers, and the Armed Forces—all those who had to be brought in by the use of special and somewhat involved procedures, and from whom typically it was more difficult to get accurate reportings of current earnings.

During this period we not only grappled with the most difficult and complicated parts of coverage, but the extensions resulted in peak workloads growing out of a backlog of overage people in each coverage group suddenly made eligible in a short qualifying period. Similar peaking resulted from picking up other backlogs due to legislation; to name just a few: The 1950 amendments enacted August 28, 1950, picked up and made eligible for benefits on September 1, 1950, about 530,000 persons on the basis of liberalized insured status requirements which conferred fully insured status on all those who had accumulated as much as 6 quarters of coverage since 1936; the 1956 amendments enacted August 1, 1956, lowered the retirement age for women and thereby made 710,000 women between age 62 and 64 immediately eligible for benefits; the 1954 and the 1956 amendments providing for the disability freeze and for cash disability benefits made eligible for these new benefits soon after enactment hundreds of thousands of workers with severe impairments whose onset of disability went back as far as 1941. Each time the enactment of legislation gave rise to a sudden one-time workload

that was many times the size of the continuing load. Such backlogs cause serious problems of staffing and work absorption because they cannot be fully anticipated and because staffing must take into account the going level of work in the future as well as the backlog.

Extension of coverage involved necessary but complicated changes in benefit provisions—new starts, dropouts, alternative computation points for computing benefit amounts, and other innovations made necessary by the grafting of new coverage on an old program. And during this same period a whole new risk was provided for—the risk of disability which, like recent coverage, was omitted from the program in the early years, at least in part, because of arguments about the difficulty of administration.

THE BUREAU HAS WORKED UNDER FORCED DRAFT SINCE FISCAL YEAR 1950

In these 7 years, although the amount of work we had to do tripled, the number of Bureau employees only doubled. A substantial part of the difference is attributable to improved procedures, methods, technology, and better qualified and trained personnel. Nonetheless, a significant part of the difference stemmed from our inability, under the circumstances, to gear up and staff up to the job with the speed and quality we wanted when its dimensions were increasing so rapidly, on some occasions almost overnight. As previously indicated, each of the major amendments contained provisions which made for sudden onetime peakloads and they were loads that seldom could be prepared for until after the Congress passed the amendment. This, of course, is in the nature of Government operations, and we would not suggest for a minute that the enactment of program changes should be delayed until the administering organization has placed itself in a position of 100 percent readiness, but although unavoidable, these administrative problems are none the less very significant.

As the peak loads descended upon the Bureau as a consequence of major legislation, we had to do the job with the staff and the resources that it was feasible to obtain. That the employees of the Bureau have done so well under these circumstances has been a source of great pride to me. The 7-year period was one of practically unrelieved work pressure requiring the very heavy usage of overtime to reduce backlogs and to achieve more nearly current processing.

FISCAL YEAR 1957 BROKE PREVIOUS RECORDS

One could say that the period fiscal year 1951 through 1957 was one of new peaks each year with 1957 the "Mount Everest" towering over them all. In claims operations—the most significant Bureau workload—the impact was most critical; the Bureau received 3,300,000 retirement and survivor claims applications, about 70 percent more than was received in 1956. In addition, the 1956 amendments added work arising from a new risk not covered under the program in prior years in the sum of 302,000 applications for disability insurance benefits and 45,000 claims for childhood disability payments. In the whole area of retirement, death, and disability claims, our district offices in that one year dealt with 11 million individuals who made inquiries as to claims matters. A substantial part of this group visited our district offices and had their inquiries answered on the spot.

The Bureau recruited and trained more than 3,500 employees during 1957. Although the workload situation actually reflected a need almost twice that figure, it simply was not feasible or possible for the Bureau to hire and train sufficient people and have them available by the time the amendment workload hit the Bureau. In addition to more people, the Bureau used other administrative resources to get workloads under control as quickly as possible and to achieve more normal operating conditions. We were able to contain the work by heavy use of overtime, special procedures, work deferments, shifts of work and staff between offices, hiring of temporary and part-time clerical employees, and many other devices and actions. By the end of fiscal year 1957, the number of old-age and survivors insurance claims in process in the district offices, which had reached the all-time high of 475,000 applications in February 1957, was reduced to 197,000.

THE WORK PLANS WE VISUALIZED FOR FISCAL YEAR 1958 ONE YEAR AGO

The outlook on April 10, 1957, when we testified before this committee on the 1958 fiscal year appropriation request was that much of the pressure from amendments would be behind us in fiscal year 1958. Although backlog workloads in disability and in farm self-employment would still have to be handled in 1958, we felt that, taken as a whole, the Bureau would be able to reemphasize the goal

of service to the public, fill up gaps in training and establish standards for work that would represent the best balance possible between a quality product and economy of operations. We thought that starting in fiscal year 1958, we would have the opportunity to begin a thorough reexamination of program, policies, and procedures—a reexamination that would be characterized by careful study and evaluation with the dominating goal being—What do we need to do to improve our service to the OASI contributor.

EXPECTATIONS FOR FISCAL YEAR 1958 HAVE NOT MATERIALIZED

We have been able to do only a part of what we planned in fiscal year 1958. As you well know we had to appear before you once again on February 26, 1958, to request additional funds to enable us to more adequately cope with much heavier than expected workload receipts. Our experience in the new area of farm claims and the drop in the level of employment made clear at that time the need for an increase of over 500,000 in the estimate of survivor and retirement claims over the original estimate for fiscal year 1958. Since February it has become clear that this increase over the original estimate will be over 600,000. This increase of about 30 percent in the workload has necessitated that once again we have had to direct our every effort and our every resource, first to contain the workloads, and, second, to reduce the levels of work on hand to more manageable proportions. Once again in 1958 we have had to give attention to emergency situations and put our main emphasis on operations directly tying to the workload. The staff that we have been able to assign to improvements in service, the reexamination of program, policies, procedures, and all of the other planning actions necessary in changing from an emergency type operation to one suitable for the long haul, has been sorely limited. We have despite the difficulties made a beginning.

WORKLOAD OUTLOOK FOR 1959 MAKES QUESTIONABLE WHETHER OPERATIONS WILL FULLY RETURN TO NORMAL AS EARLY AS PREVIOUSLY EXPECTED

At the time we appeared before the House Appropriations Subcommittee we looked to 1959 for the opportunity which a year ago we thought we would have in 1958. We did foresee at that time the possibility that due to economic conditions we would receive more claims work than was estimated in support of the 1959 appropriation request, and also that we would likely carry over from 1958 into 1959 some additional work for which we were not budgeted.

What was a hazy uncertainty then, however, now looks much larger and more certain. Based on optimistic economic assumptions it appears clear that the amount of work we will have to do in 1959 will be substantially in excess of the previous estimate. The proportion of this excess will be discussed in more detail later on. It is appropriate here to take note of it because the prospects of this large and as yet unbudgeted workload will make the return to normal operating conditions in 1959 more difficult to attain.

If, however, the workload situation does not change radically from that which we now visualize, and assuming that supplemental funds will later by made available commensurate with the additional workloads expected, we are confident that by the latter part of 1959 everything will be back on a normal footing. We would expect operations to be substantially on a current basis, that service to the public will have been measurably improved and that we will be able to make a very substantial addition to the program of self-improvement which we have set up for ourselves and on which, despite difficulties, we have already made a beginning.

SOME AREAS OF CURRENT CONCERN

Of course, the overriding problem that we have had to face was that of excessive amounts of work in process, work which until recently was backing up at several stages of the operations and which from the point of view of the public, meant that they had to wait unduly long for the Bureau to complete action on claims and other actions which they had initiated.

There are currently at least three other very significant areas of recent or continuing concern which we would like to touch on. These are:

(1) *Disability determinations have taken too long a time.*—People have had to wait too long to get a disability determination. We have made good progress. In August of 1957, just 7 months ago, disability cash benefits first became payable. Today there are already 182,800 disability beneficiaries on the rolls entitled to monthly benefits. Where a half a year ago very few cases were decided in less

than 5 or 6 months, those filing today who present good medical documentation will, generally, have determinations made within 2½ to 3 months. Although several factors account for the long time it was taking to process disability claims, mostly it was again a matter of a large number of people made eligible immediately upon the passage of the amendments—a large backlog to be processed in a short time.

The cash benefits provision has brought in 470,400 claims to date and has required the conversion of an additional 109,700 cases from freeze to benefit status. The initial disability freeze legislation in August 1954 brought in a large backlog of cases because it authorized the filing of applications by persons whose disabilities dated back to 1941. In the first two years alone 470,000 freeze applications were filed. Normal annual receipts for freeze and cash benefits will come to only a fraction of the one-time loads which had to be handled shortly after the passage of each piece of legislation.

The peaking of receipts prior to deadline dates of June 30, 1957, and December 31, 1957, for retroactivity also created temporary problems. In addition, as required by law, these applications generally are processed through State vocational rehabilitation agencies under agreements with the Federal Government and these agencies faced the problem of organizing new units and recruiting and training staff to handle peak loads forwarded to them.

Another delaying factor is the complexity inherent in evaluating the nature and extent of each applicant's disability. Each claim requires the gathering of medical and other evidence from physicians, institutions, and various sources. This can be particularly time consuming when the severity of the disability must be determined as of a given period some years in the past.

The Bureau, from the first, has been very much concerned with the time it took to make a determination of disability. Right from the beginning it took vigorous action to speed up handling. Staffing in State agencies has been increased as rapidly as possible, their training situation is vastly better, and special attention is continually being given to the analysis of methods to speed up the process. A significant special action taken by the Bureau has been the negotiation of temporary changes in the agreements with those States which have had large backlogs. Under those modified agreements cases are sent from the OASI district offices to OASI headquarters for more prompt handling than is possible in the particular State agencies, thus relieving the States of some of their load and giving them a chance to work down their backlogs. This action has been very effective and the States, generally, have achieved currency in recent weeks.

Changes have also been made in Bureau procedures with the same objective. Since the great bulk of backlog disability claims have now been filed, it is possible to begin medical and other development at earlier stages without waiting to check the earnings history of the applicant, thus cutting down the time the applicant must wait. District offices are also beginning to take applications before the end of the 6-month waiting period. In this way the claim can be developed before the person becomes entitled to benefits.

These and similar actions have accomplished a significant reduction in processing time. Despite the inherent complexities of the operation, the reduction in the backlog and the steps we have already taken have considerably reduced the processing time. We are conscious of the fact, however, that it will always take longer to process disability cases than it takes to process retirement and survivor claims but some experience under more normal conditions is needed before we will be able to find out how much if any more reduction, it will be practical for us to make in the current processing time.

(2) *Improvements in the area of agricultural coverage.*—There is need to improve the understanding in farm areas of old-age and survivors insurance and the rights and obl gations of individuals under the program so as to improve reporting of people covered under the agricultural provisions and as well obtain better compliance with the retirement test and other provisions of the law. Our experience, so far, shows that agricultural coverage provisions are working well, considering how new they are but that there are many areas where we can improve on the one hand, the farmer's and the farmworker's understanding and on the other hand better adapt our administrative procedures, and practices and policies to the way of doing things which is characteristic of farmers and farm communities.

Attention has been, and is being given to the problem of completeness and accuracy of reporting. There are particular problems in such areas as crew leaders, business arrangements involving family relationships, and self-employed sharecroppers. Another subject receiving special attention is the way the retirement test is working out for self-employed farmers. Studies of problems

in these and related areas now in process and planned will enable us to make our policies and procedures more effective and make it possible to develop improved ways of getting across understanding of individual rights and responsibilities under the old-age and survivors insurance program.

(3) *Fully equipping our employees to do the job through training.*—This is but a segment of the larger area of concern—the thoroughgoing reexamination of all of administration and the reengineering necessary to do the best job we are capable of. It has been a particular concern of ours, for some time now, that we have not been able to fully equip all Bureau employees to do their total jobs at the level of performance that we would like. While we have gotten thousands of new employees quickly into production through effective short courses and other training devices, the workload squeeze of the past years and in particular of 1957 has forced a cutting down, and a cutting out, of time devoted to training, to the preparation and distribution of training materials, and to organization of training programs to meet training needs which are essential to a program such as OASI, and to a career service. Such training is necessary to provide the kind of prompt, courteous, efficient service that the public is entitled to, to insure economical operations, and to give individual employees the satisfaction which they should derive from making the most meaningful contribution to the administration of a program in which they are making their career. As long as the present workload situation continues we will have to forgo substantial steps that are needed in the matter of training, although, at the planning level, we are developing our thoughts and ideas as to what might be done to set up a sustained and vigorous training program just as soon as the workload situation permits. We are hopeful that a good beginning will be possible in 1959.

APPROPRIATION REQUEST FOR FISCAL YEAR 1959

The House has already approved the full amount of $133,300,000 which the Bureau requested for fiscal year 1959. This amount is $5,390,000 less than the $138,690,000 appropriated for 1958. This budget estimate is based on estimates of the workloads which we will receive in fiscal year 1959 formulated in May and June of 1957 before the current economic recession. As previously indicated, it is now clear that these workload estimates are substantially understated.

Now the minimum additional receipts of claims based on optimistic economic assumptions are estimated to be about 200,000. Should the actual economic situation in 1959 turn out to be less favorable, the increased work which the Bureau would have to handle might well be 3 to 4 times this amount.

Over and above this there is a need to take into account funds required to liquidate a carryover of work from 1958 to 1959. It is now clear that we will receive about 150,000 more claims in 1958 than we indicated we could handle in presenting the supplemental for 1958. We are doing better than we had reason to plan on in handling this heavy load but it is nevertheless all but inevitable that we will have to carry over about one-half million dollars worth of work into 1959.

Since the budget before you is based on workload estimates made a year ago before the economic recession, consideration is being given now to how much in additional funds will be required.

EFFECT OF HOUSE ACTION

The House has approved the full amount of $133,300,000 requested by the Bureau for fiscal year 1959. However, it inserted in title IX, general provisions of its approved bill, a section 903, dealing with advances to States which is a matter of serious concern to the Bureau.

Section 903 limits the advances to States for the first quarter of the next succeeding fiscal year to the amount so advanced in the previous year. Under agreements made with the Department the States act as agents of the Bureau in making determinations of disability under the disability insurance and freeze provisions of the Social Security Act. In May and June of each year, the Bureau advances funds to the States for the first quarter of the next succeeding fiscal year to insure uninterrupted operation. In view of the gradually increasing amount of followup work which the States will be called on to perform as the disability program matures, the effect of section 903 would be to prevent the Bureau from advancing funds to State agencies in the first quarter commensurate with the workloads. The application of this section to the Bureau of Old-Age and Survivors Insurance appropriation would, accordingly, create a serious problem and we, therefore, join with the other organizational units of the Department in recommending its deletion.

PROGRESS ON OASI BUILDING

We are happy to report to the committee that there is much activity at our new office headquarters building site. On October 31, 1957, contracts were signed for such basic work as the construction of the building and for installation of elevators and escalators—the total of these initial contractsa mounting to $22,060,554. In November 1957 the contractors initiated grading work and actual construction has been underway since. The contract calls for completion of construction and readiness for occupancy by early 1960. There is even a little bit of hope that the contractor can beat that scheduled date by a few months.

CONCLUDING REMARKS

We would not wish to close without saying that we would be delighted to have members of this committee visit, at any time convenient to them, our operations in Baltimore to observe for themselves the application of electronic machinery to our work, the disability operations, and other aspects of our processing which may be of interest. This invitation is of course not limited to Baltimore—you will be warmly welcome at any of our installations no matter where located throughout the Nation.

Program administered by Bureau of Old-Age and Survivors Insurance

The old-age and survivors insurance program was established by title II of the Social Security Act of 1935. Through a series of amendments to the act, the program now provides protection to over 90 percent of the total labor force and their families against the loss of earnings because of old-age, disability, and death. Tax contributions from employers, employees, and self-employed and members of the Armed Forces are deposited in the Federal old-age and survivors insurance and Federal disability insurance trust funds, out of which benefit payments and administrative costs are paid.

The past 8 years (fiscal year 1950 through fiscal year 1957) have, through a series of amendments to the act in 1950, 1952, 1954, and 1956, significantly changed the scope of the program and its effect on the Nation's economy. These amendments have accelerated the long-term growth of the old-age and survivors insurance phase of the program and created an entirely new program area—disability freeze and insurance benefits.

The effect of legislative changes coupled with the growth in number of persons attaining insured status under the initial provisions of the act on the number of beneficiaries and amount of benefit payments is reflected in the table below:

Old-age and survivors insurance

[In millions]

Fiscal year	Beneficiaries on the rolls (end of year)	Benefits paid during year
1941	0.4	$64
1945	1.3	240
1950	3.3	727
1955	7.8	4,333
1957	10.7	6,515
1958 (estimated)	12.0	7,880
1959 (estimated)	12.9	8,500
1980 (estimated)	22.0	17,000

Beginning in fiscal year 1958, disability insurance benefits are payable. Estimated amounts and number of beneficiaries are shown below:

Disability insurance

[In thousands]

Fiscal year	Beneficiaries on the rolls (end of year)	Benefits paid during year
1958 (estimated)	200	$175,000
1959 (estimated)	263	215,000
1980 (estimated)	1,000	1,000,000

Today, the average monthly retirement benefit amounts to $60 for all retired workers. For those who had earnings after 1950 and were eligible for the dropout, however, the average monthly payment is $74. Tabulated below are average benefit amounts by various family groups.

Group	Average benefit amount	
	All beneficiary families	Where worker had earnings after 1950 and was eligible for dropout
Retired worker and aged wife	$108	$126
Aged widow	51	68
Widowed mother and two children	145	182

The average monthly benefit paid to a disabled worker is $72. The average monthly amount, however, before offset (involving reduction because of other disability benefits) is $81.

Organization and staffing of Bureau of Old-Age and Survivors Insurance

Old-age and survivors insurance is a federally administered program. The public is directly serviced through 567 district offices located in the principal cities in each State, Hawaii, Alaska, and Puerto Rico. Smaller communities are serviced through regularly scheduled visits to 3,675 contact stations. In addition to its district offices the Bureau has six payment centers located in different sections of the country. These payment centers certify monthly the benefits paid under the program. The Bureau's administrative offices and records center are located in Baltimore. In addition to this organization, the Bureau has contracted for the services of 56 State and territorial agencies in making disability determinations.

The volume of work received by the Bureau in any year is not subject to its control. It is dependent upon such factors as level of employment, labor mobility, birth, marriage, death, and disability rates. Indicated below are the budgeted estimates of some major workloads that will be received by the various organizational units of the Bureau in fiscal year 1959.

Workload	Organization unit	Amount [1]
Original and duplicate account numbers issued	District offices	$6,173,000
Earnings items received for processing to individual accounts	Records center	275,793,000
Inquiries on claims matters	District offices	8,369,000
Claims applications for retirement and survivors benefits	do	2,276,000
Claims applications for disability benefits	do	205,000
Beneficiaries on rolls:		
OASI (end of year)	Payment centers	12,949,000
Disability (end of year)	do	263,000
Disability claims received for adjudication	State agencies	172,900

[1] The figures below reflect the estimates made in May and June 1957 in support of the $133,300,000 request. Now clear that several of these loads will be substantially higher.

Over a period of years the Bureau has assumed a larger and more difficult job without a corresponding increase in staff. To process workloads estimated for fiscal year 1959 as reflected in the appropriation request, we will need manpower equivalent to an average staff of 21,540 employees. The staffing requirement would be about 25 percent greater, or close to 27,000, at the level of production per man-year that the Bureau experienced in fiscal year 1950. The table below indicates the growth in workloads and manpower from 1950 to 1959.

[Fiscal year 1950 equals 100]

Year	Workload [1]	Man-years [1]
1950	100.0	100.0
1951	147.2	120.1
1952	138.9	123.7
1953	163.2	128.6
1954	164.7	124.9
1955	199.4	146.2
1956	215.6	158.3
1957	305.2	196.3
1958 (estimated)	28.82	205.5
1959 (estimated) [2]	265.5	190.4

[1] Excludes workloads and manpower of State agencies.
[2] The indices for workloads and man-years do not reflect the higher levels now expected.

The improvement in production per man-year and the ability to do the Bureau's work with relatively fewer employees has stemmed in large part from procedural changes and the introduction of electronic and other office equipment. In recent years, particularly in fiscal year 1957, the peaking of workloads arising from major amendments to the act, together with the inability to build up staff quickly enough to cope with them has had the unavoidable result of forcing the Bureau to do the job with fewer employees than would have been desirable.

Grants to States for Public Assistance, Bureau of Public Assistance

STATEMENTS OF JAY L. RONEY, DIRECTOR, BUREAU OF PUBLIC ASSISTANCE, ACCOMPANIED BY JAMES F. KELLY, DEPARTMENTAL BUDGET OFFICER

APPROPRIATION ESTIMATE

"*Grants to States for Public Assistance*

"[Grants to States for public assistance:] For grants to States for old-age assistance, aid to dependent children, aid to the blind, and aid to the permanently and totally disabled, as authorized in titles I, IV, X, and XIV of the Social Security Act, as amended (42 U. S. C., ch. 7, subchs. I, IV, X, and XIV), [$1,600,000,000] *$1,806,400,000,* of which such amount as may be necessary shall be available for grants for any period in the prior fiscal year subsequent to March 31 of that year.',

Amounts available for obligation

	1958 appropriation	1959 estimate	1959 House allowance
Regular appropriation	$1,600,000,000	$1,806,400,000	$1,806,400,000
Supplemental appropriation	170,600,000		
Total appropriation	1,770,600,000	1,806,400,000	1,806,400,000
Available from subsequent year appropriation	450,000,000	450,000,000	450,000,000
Available in prior year	−328,667,973	−450,000,000	−450,000,000
Total available for obligation	1,891,932,027	1,806,400,000	1,806,400,000

Obligations by activity

Description	1958 appropriation	1959 estimate	1959 House allowance
1. Payments to recipients:			
(a) Old-age assistance	$1,022,500,000	$1,026,100,000	$1,026,100,000
(b) Aid to dependent children	471,700,000	492,900,000	492,900,000
(c) Aid to the blind	42,400,000	43,900,000	43,900,000
(d) Aid to the permanently and totally disabled	123,100,000	136,000,000	136,000,000
Total	1,659,700,000	1,698,900,000	1,698,900,000
2. State and local administration:			
(a) Old-age assistance	57,100,000	60,000,000	60,000,000
(b) Aid to dependent children	43,100,000	46,100,000	46,100,000
(c) Aid to the blind	3,300,000	3,700,000	3,700,000
(d) Aid to the permanently and totally disabled	13,500,000	15,200,000	15,200,000
Total	117,000,000	125,000,000	125,000,000
Total for all programs	1,776,700,000	1,823,900,000	1,823,900,000
Collections and adjustments during year	−17,461,101	−17,500,000	−17,500,000
Obligations for grants to States for fiscal year	1,759,238,899	1,806,400,000	1,806,400,000
Amounts of 1958 appropriation used to complete the 1957 requirements	+11,361,101		
Total obligations against appropriation	1,770,600,000	1,806,400,000	1,806,400,000
Amount obligated in prior year for grants chargeable to appropriation for current year	−328,667,973	−450,000,000	−450,000,000
Amount obligated in current year for grants chargeable to appropriation for subsequent year	450,000,000	450,000,000	450,000,000
Total obligations	1,891,932,027	1,806,400,000	1,806,400,000
Financing:			
Appropriation available from subsequent year	−450,000,000	−450,000,000	−450,000,000
Appropration available in prior year	328,667,973	450,000,000	450,000,000
Appropriation	1,770,600,000	1,806,400,000	1,806,400,000

Obligations by object

Object classification	1958 appropriation	1959 estimate	1959 House allowance
Grants, subsidies, and contributions	$1,891,932,027	$1,806,400,000	$1,806,400,000

Summary of changes

1958 appropriation, including supplemental	$1,770,600,000
1959 appropriation request	1,806,400,000
Net change	+35,800,000

Estimated requirements for program items

	1959 budget estimate	1959 House allowance
Payments to recipients:		
Old-age assistance	$3,600,000	$3,600,000
Aid to dependent children	21,200,000	21,200,000
Aid to the blind	1,500,000	1,500,000
Aid to the permanently and totally disabled	12,900,000	12,900,000
Total increase for payments to recipients	39,200,000	39,200,000
State and local administration:		
Old-age assistance	2,900,000	2,900,000
Aid to dependent children	3,000,000	3,000,000
Aid to the blind	400,000	400,000
Aid to the permanently and totally disabled	1,700,000	1,700,000
Total increase for State and local administration	8,000,000	8,000,000
Total change in program requirements	47,200,000	47,200,000
Amount of 1958 appropriation used to complete 1957 requirements	−11,361,101	−11,361,101
Additional amount for collections and adjustments for prior years estimated to be expended in States in 1959	−38,899	−38,899
Net change in appropriation requirements	+35,800,000	+35,800,000

EFFECT OF HOUSE ACTION

The House, in acting upon this appropriation, approved the full amount of $1,806,400,000 requested for 1959 for grants to States for public assistance. However, the appropriation bill (H. R. 11645) for fiscal year 1959 approved by the House contains the following new language provision:

"SEC. 903. Advances to States for the first quarter of the next succeeding fiscal year, as authorized in this act, shall not exceed the sum so advanced for the respective programs in the previous year."

This language applies to the appropriations in the bill that have special appropriation language which permits, after May 31, the certifying of grants for the first quarter of the next fiscal year by drawing upon the appropriation for that year. Among the appropriation titles that would be affected is "Grants to States for Public Assistance."

The committee report was critical of the budget presentation, particularly with respect to the way advances and adjustments were shown in the summary statement for the Department of Health, Education, and Welfare chapter in the President's budget. Since adjustments between fiscal years are not in equal amounts, the picture on an obligational basis as reflected in this statement does not reflect the same fiscal requirements as would be indicated by the appropriations for the same fiscal years. The House apparently proposed this language in order to correct this problem, which is largely one of presentation and bookkeeping.

The language, as proposed by the House, would seriously affect the system of grants to States for public assistance as provided for by the Social Security Act. The very nature of the language is such that it would result in a limitation with respect to meeting grant requirements of the States for the first quarter of the fiscal year.

The Social Security Act includes a system designed to provide regular and continuous financial support to State programs in order that the States in turn can assure promptness and regularity in making advance payments to needy eligible individuals. To achieve this, the act provides for advances of grants to States in accordance with the estimated needs as set forth by the States prior to the beginning of each quarter, subject to later adjustment based on actual expenditure. The grants are made in advance for the first quarter of the year as is the case for the other quarters in the year. The special provision that has been indicated in the appropriation acts for several years was to enable the usual process of grants under the law to be followed in the event that the new fiscal year's appropriation was not available in time.

If the proposed language is adopted, there will be no assurance that it will be possible to advance "such sums as may be necessary" to the States for the first quarter. In the past, as in the future, the amount required to meet the States' public assistance requirements for the first quarter will differ each fiscal year, depending on such factors as legislation enacted by the Congress and the economic fluctuations in each State. A limitation on the amount that could be advanced

in June for the first quarter of the next succeeding fiscal year would make it impossible to give account to changing program and economic needs.

The proposed language would also have a significant effect on Federal-State relationships. Since the Social Security Act requires that grants to States shall be certified to the United States Treasury on a quarterly basis "prior to the beginning" of each quarter, the procedure in effect is to compute and approve grants and to encumber funds for the entire quarter and to notify the States of the amount of the quarterly grant. The States have likewise adopted definite operating procedures for the time and method of making payments to recipients which are dependent on our process as well as on State and local governmental fiscal operations. States usually make payments to recipients for a month at the beginning of the month, regularly, and on set dates. Thus, recipients know when they may expect their checks and can plan to meet their needs and obligations accordingly. Any substantial change in the Federal process, such as the delay in certification of grants for the first quarter which would result from the proposed language, sets in motion a chain of actions involving States and local units of the Government as well as the lives of needy public assistance recipients.

Public assistance: Estimated obligations for grants to States for fiscal year 1959

[Based on State public assistance agencies' estimates]

States and Territories	Old-age assistance	Aid to dependent children	Aid to the blind	Aid to the permanently and totally disabled	Total
Total	$1,072,830,000	$536,310,000	$47,310,000	$149,950,000	$1,806,400,000
Alabama	38,685,000	9,873,000	629,000	5,857,000	55,044,000
Alaska	708,000	1,078,000	42,000		1,828,000
Arizona	6,201,000	5,625,000	419,000		12,245,000
Arkansas	21,578,000	4,634,000	876,000	2,481,000	29,569,000
California	135,691,000	52,300,000	7,372,000	6,847,000	202,210,000
Colorado	24,579,000	6,338,000	164,000	2,853,000	33,934,000
Connecticut	7,372,000	4,968,000	169,000	1,172,000	13,681,000
Delaware	750,000	1,201,000	151,000	220,000	2,322,000
District of Columbia	1,335,000	2,889,000	126,000	1,297,000	5,647,000
Florida	31,962,000	15,287,000	1,285,000	4,518,000	53,052,000
Georgia	38,609,000	12,675,000	1,519,000	8,065,000	60,868,000
Hawaii	675,000	2,698,000	47,000	607,000	4,027,000
Idaho	3,302,000	1,430,000	85,000	473,000	5,290,000
Illinois	38,328,000	30,161,000	1,712,000	8,685,000	78,886,000
Indiana	15,330,000	9,855,000	963,000		26,148,000
Iowa	16,392,000	6,534,000	763,000		23,689,000
Kansas	16,316,000	4,228,000	275,000	3,401,000	24,220,000
Kentucky	20,355,000	14,432,000	1,290,000	2,137,000	38,214,000
Louisiana	61,427,000	20,659,000	1,325,000	7,158,000	90,569,000
Maine	5,984,000	3,967,000	259,000	645,000	10,855,000
Maryland	4,785,000	7,233,000	228,000	2,847,000	15,093,000
Massachusetts	42,131,000	11,320,000	1,105,000	5,304,000	59,860,000
Michigan	30,022,000	19,931,000	852,000	1,809,000	52,614,000
Minnesota	22,418,000	8,059,000	594,000	1,137,000	32,208,000
Mississippi	24,871,000	7,580,000	1,869,000	2,156,000	36,476,000
Missouri	55,653,000	17,165,000	2,855,000	7,600,000	83,273,000
Montana	3,653,000	1,803,000	233,000	744,000	6,433,000
Nebraska	7,989,000	2,510,000	522,000	907,000	11,928,000
Nevada	1,224,000	816,000	84,000		2,124,000
New Hampshire	2,668,000	992,000	134,000	249,000	4,043,000
New Jersey	9,631,000	7,644,000	503,000	3,083,000	20,861,000
New Mexico	5,432,000	6,339,000	217,000	1,076,000	13,064,000
New York	44,629,000	67,492,000	2,462,000	20,631,000	135,214,000
North Carolina	17,229,000	14,750,000	2,135,000	5,712,000	39,826,000
North Dakota	3,983,000	1,897,000	62,000	584,000	6,526,000
Ohio	41,119,000	17,702,000	1,999,000	5,168,000	65,988,000
Oklahoma	44,397,000	12,083,000	983,000	3,918,000	61,381,000
Oregon	8,749,000	3,313,000	168,000	2,083,000	14,313,000
Pennsylvania	21,253,000	29,205,000	3,797,000	6,685,000	60,940,000
Puerto Rico	1,784,000	2,505,000	70,500	953,000	5,312,500
Rhode Island	3,448,000	3,547,000	82,000	944,000	8,021,000
South Carolina	12,364,000	4,893,000	667,000	2,715,000	20,639,000
South Dakota	4,150,000	2,313,000	87,000	440,000	6,990,000
Tennessee	22,187,000	13,654,000	1,219,000	2,239,000	39,299,000
Texas	85,927,000	17,487,000	2,683,000	3,637,000	109,734,000
Utah	4,282,000	2,858,000	121,000	961,000	8,222,000
Vermont	2,879,000	900,000	91,000	307,000	4,177,000
Virgin Islands	101,000	77,000	5,000	17,000	200,000
Virginia	5,752,000	6,988,000	554,000	2,402,000	15,696,000
Washington	25,489,000	8,772,000	399,000	2,822,000	37,482,000
West Virginia	8,265,000	15,934,000	474,000	3,456,000	28,129,000
Wisconsin	16,920,000	7,387,000	545,000	651,000	25,503,000
Wyoming	1,863,000	328,000	36,000	299,000	2,526,000
Adjustment due to rounding	+4,000	+1,000	+3,500	−2,000	+6,500

Public assistance: Estimates of Federal, State, and local expenditures for assistance payments and administration, and the Federal share thereof, fiscal years 1958 and 1959

Category	Fiscal year 1958 estimate		Fiscal year 1959 estimate	
	Total	Federal share	Total	Federal share
	Total amount for assistance and administration			
Total	$3,164,800,000	[1] $1,776,700,000	$3,276,100,000	[2] $1,823,900,000
Old-age assistance	1,941,400,000	1,079,600,000	1,977,200,000	1,086,100,000
Aid to dependent children	870,300,000	514,800,000	912,600,000	539,000,000
Aid to the blind	93,800,000	45,700,000	98,100,000	47,600,000
Aid to the permanently and totally disabled	259,300,000	136,600,000	288,200,000	151,200,000
	Amount for assistance			
Total	$2,928,400,000	$1,659,700,000	$3,023,400,000	$1,698,900,000
Old-age assistance	1,826,300,000	1,022,500,000	1,856,200,000	1,026,100,000
Aid to dependent children	783,600,000	471,700,000	819,800,000	492,900,000
Aid to the blind	86,500,000	42,400,000	89,900,000	43,900,000
Aid to the permanently and totally disabled	232,000,000	123,100,000	257,500,000	136,000,000
	Amount for administration			
Total	$236,400,000	$117,000,000	$252,700,000	$125,000,000
Old-age assistance	115,100,000	57,100,000	121,000,000	60,000,000
Aid to dependent children	86,700,000	43,100,000	92,800,000	46,100,000
Aid to the blind	7,300,000	3,300,000	8,200,000	3,700,000
Aid to the permanently and totally disabled	27,300,000	13,500,000	30,700,000	15,200,000

[1] The Federal share includes: $1,600,000,000 from the regular appropriation; $159,238,899 from the supplemental request, and $17,461,101 from collections and adjustments estimated to be received by the States during the year.

[2] The Federal share includes: $1,806,400,000 from the appropriation request and $17,500,000 from collections and adjustments, estimated to be received by the States during the year.

Old-age assistance: Estimates of Federal, State, and local expenditures for assistance payments and administration, and the Federal share thereof, fiscal years 1958 and 1959

	Fiscal year	
	1958 estimate	1959 estimate
1. Amount for assistance and administration:		
Total	$1,941,400,000	$1,977,200,000
Federal share	$1,079,600,000	$1,086,100,000
2. Amount for assistance payments:		
Total	$1,826,300,000	$1,856,200,000
Federal share:		
Amount	$1,022,500,000	$1,026,100,000
Percent	56.0	55.3
3. Amount for administration:		
Total	$115,100,000	$121,000,000
Federal share	$57,100,000	$60,000,000
4. Average monthly number of recipients	2,495,000	2,475,000
5. Average monthly payments	$61.00	$62.50

Aid to dependent children: Estimates of Federal, State, and local expenditures for assistance payments and administration, and the Federal share thereof, fiscal years 1958 and 1959

	Fiscal year	
	1958 estimate	1959 estimate
1. Amount for assistance and administration:		
Total	$870,300,000	$912,600,000
Federal share	$514,800,000	$539,000,000
2. Amount for assistance payments:		
Total	$783,600,000	$819,800,000
Federal share:		
Amount	$471,700,000	$492,900,000
Percent	60.2	60.1
3. Amount for administration:		
Total	$86,700,000	$92,800,000
Federal share	$43,100,000	$46,100,000
4. Average monthly number of recipients:		
Families	661,000	681,000
Children	1,857,000	1,913,000
Persons	2,435,000	2,508,000
5. Average monthly payments:		
Per family	$98.80	$100.37
Per person	$26.81	$27.24

Aid to the blind: Estimates of Federal, State, and local expenditures for assistance payments and administration, and the Federal share thereof, fiscal years 1958 and 1959

	Fiscal year	
	1958 estimate	1959 estimate
1. Amount for assistance and administration:		
Total	$93,800,000	$98,100,000
Federal share	$45,700,000	$47,600,000
2. Amount for assistance payments:		
Total	$86,500,000	$89,900,000
Federal share:		
Amount	$42,400,000	$43,900,000
Percent	49.0	48.8
3. Amount for administration:		
Total	$7,300,000	$8,200,000
Federal share	$3,300,000	$3,700,000
4. Average monthly number of recipients	109,700	112,300
5. Average monthly payments	$65.70	$66.67

Aid to the permanently and totally disabled: Estimates of Federal, State, and local expenditures for assistance payments and administration, and the Federal share thereof, fiscal years 1958 and 1959

	Fiscal year	
	1958 estimate	1959 estimate
1. Amount for assistance and administration:		
Total	$259,300,000	$288,200,000
Federal share	$136,600,000	$151,200,000
2. Amount for assistance payments:		
Total	$232,000,000	$257,500,000
Federal share:		
Amount	$123,100,000	$136,000,000
Percent	53.0	52.8
3. Amount for administration:		
Total	$27,300,000	$30,700,000
Federal share	$13,500,000	$15,200,000
4. Average monthly number of recipients	312,300	339,500
5. Average monthly payments	$61.93	$63.22

PREPARED STATEMENT

Senator HILL. All right. We have Mr. Roney, Director, Bureau of Public Assistance.

We are glad to have you back.

Mr. RONEY. Mr. Chairman, inasmuch as the House approved the full amount of the request for grants to States for public assistance, and since there is a full explanation in our prepared material regarding the estimate, with your permission we will submit our prepared statement.

Senator HILL. We will put your prepared statement in the record in full.

(The statement referred to follows:)

STATEMENT BY DIRECTOR, BUREAU OF PUBLIC ASSISTANCE

Grants to the States for public assistance are based on plans submitted by the States for each program and approved by the Social Security Administration as meeting the requirements of the Social Security Act. This provision of the act for a State plan recognizes the desirability of reserving to each State the necessary latitude in determining the scope and methods of operation of its program within the general conditions set forth in the Federal law. At the same time, it provides a systematic basis for a State to submit to the Federal Government a document which specifies the nature of its programs and the types of expenditures in which the Federal Government is asked to participate.

PROGRAM COVERAGE

All the States, including the District of Columbia, Alaska, Hawaii, Puerto Rico, and the Virgin Islands, have approved plans for old-age assistance, aid to dependent children and aid to the blind; and 48 States now have approved plans for the program of aid to the permanently and totally disabled established by the Social Security Act Amendments of 1950. It is not anticipated that this relatively new program will be in operation in 1959 in the other five jurisdictions—Alaska, Arizona, Indiana, Iowa, and Nevada.

ESTIMATED COSTS, FISCAL YEAR 1959

For 1959, total expenditures for assistance and administration are estimated at almost $3.3 billion. The Federal share of these expenditures is estimated at $1,823,900,000 of which $17.5 million will be met from the Federal share of collections and adjustments for prior years made by the States during the fiscal year 1959. Thus the appropriation request is $1,806,400,000. This amount is $35.8 million more than the appropriation for 1958 including the supplemental of $170.6 million for that year. Approximately $11.4 million of the supplemental for 1958 represents the amount needed to complete the States' requirements for 1957. Thus the amount estimated for 1959 requirements actually exceeds the amount estimated for 1958 requirements by $47.2 million. Of the total increase, $21.7 million is due to an estimated increase in average monthly payments under all programs; $17.5 million, to an estimated increase in the number of recipients under all programs except old-age assistance; and $8 million to an estimated increase in the cost of State and local administration.

BASIS FOR ESTIMATES

The State agencies administering these programs were asked to supply the Bureau of Public Assistance with their best estimates, for the fiscal years 1958 and 1959, of the amount of their total expenditures and the Federal share thereof. For the country as a whole, the States' estimates corroborated those prepared independently by the Bureau.

Number of recipients

For all programs except old-age assistance, the trend in number of recipients has been upward since 1953. A major factor underlying this trend is the increase in total population. The number receiving old-age assistance has declined, despite

the population increase, because of the continuing growth in the number who receive insurance benefits. In aid to dependent children, the upward trend results from an increase in the number of children in the population and in the total number of families, coupled with an even larger proportionate rise in the number of families broken by divorce, separation, or desertion, or headed by an unmarried mother. In recent years, these broken families have had a much smaller rise in income than normal families, with the result that more of them need assistance. Part of the growth in the program of aid to the permanently and totally disabled is due to the approval of new State plans, including for 1958 those for the large States of California and Texas. The improvement in State assistance standards made possible by additional Federal funds provided under the Social Security Amendments of 1956 also accounts for part of the rise in the number of recipients during the past year.

Average monthly payments

The additional Federal funds provided under the Social Security Amendments of 1956 brought about a rise in assistance payments. The continuing increase in cost of living will probably result in further payment increases in States that are able to finance higher payments. The rising costs of medical care are a major factor in payment increases in the adult categories.

The justification statement shows the detail on the estimated changes in number of recipients and average monthly payment under each program from 1958 to 1959.

State and local administration

The total amount to be expended for State and local administration of the 4 assistance programs is estimated at $252.7 million of which the Federal Government will contribute slightly less than one-half under each program. The Federal share is estimated at $125 million for 1959, $8 million more than in the preceding year. The Federal share of $117 million estimated for 1958 is $11.4 million more than the amount actually expended in the fiscal year 1957. About 86 percent of the administrative expense is for salaries of staff in State and local public assistance agencies.

In submitting their estimates of the amounts needed, State agencies also supplied information about the reasons for increases occurring in 1959 over 1958 and in 1958 over 1957. A little less than half the increase in both years is due to salary increases, which are given to all State and local employees including those who administer public assistance. These increases are given primarily to compensate for rises in the cost of living although some are due to within-grade promotions under established compensation plans. A little more than a third of the total increase is due to the need for additional staff to give effect to the Social Security Amendments of 1956, which provide for separate Federal matching of vendor medical payments and stress the importance of welfare services directed toward self-care, self-support, and strengthening of family life. Part of the need for additional staff stems from the changing character of the caseload, which includes a growing proportion of cases with serious social and health problems. Costs of items other than salaries, such as rentals, equipment, and supplies, also are continuing to rise; a little less than a fifth of the total increase in both years is attributed to larger expenditures for these nonsalary items.

REPORT ON COSTS OF STATE AND LOCAL ADMINISTRATION

The committee has received copies of the Department's report Federal Participation in Costs of State and Local Administration of the Public Assistance Programs. We have additional copies of the report here and shall be glad to answer any questions committee members may have.

EFFECT OF HOUSE ACTION

Appropriation bill (H. R. 11645) for fiscal year 1959 approved by the House contains a new language provision with respect to the appropriations in the bill that have special appropriation language which permits, after May 31, the certifying of grants for the first quarter of the next fiscal year by drawing upon the appropriation for that year. Among the appropriation titles that would be affected is "Grants to States for public assistance."

"SEC. 903. Advances to States for the first quarter of the next succeeding fiscal year, as authorized in this Act, shall not exceed the sum so advanced for the respective programs in the previous year."

The questions asked by the House committee in considering the public assistance appropriation request, as well as the comments in House Report No. 1565 regarding the method used in the budget presentation to show obligational authorities, indicate that this language is being proposed to deal with a bookkeeping matter.

In the opinion of the Department, the language included in the bill is not necessary in order to reflect in the budget a clearer picture of program requirements for the year in relation to appropriation estimates, but rather a change in the budget presentation itself is needed.

The language in question would seriously affect the system of grants to States for public assistance as provided for by the Social Security Act. The very nature of the language is such that it would result in a limitation with respect to meeting grant requirements of the States for the first quarter of the fiscal year.

The Social Security Act provides a system designed to provide regular and continuous financial support to State programs in order that the States in turn can assure promptness and regularity in making advance payments to needy eligible individuals. To achieve this, the act provides for advances of grants to States in accordance with the estimated needs as set forth by the States prior to the beginning of each quarter, subject to later adjustment based on actual expenditure. The grants are made in advance for the first quarter of the year as is the case for the other quarters in the year. The special provision that has been indicated in the appropriation acts for several years was to enable the usual process of grants under the law to be followed in the event that the new fiscal year's appropriation was not available in time.

If the proposed language is adopted, there will be no assurance that it will be possible to advance "such sums as may be necessary" to the States for the first quarter. In the past, as in the future, the amount required to meet the States' public assistance requirements for the first quarter will differ each fiscal year, depending on such factors as legislation enacted by the Congress and the economic fluctuations in each State. A limitation on the amount that could be advanced in June for the first quarter of the next succeeding fiscal year would make it impossible to give account to changing program and economic needs.

The proposed language would also have a significant effect on Federal-State relationships. Since the Social Security Act requires that grants to States shall be certified to the United States Treasury on a quarterly basis "prior to the beginning" of each quarter, the procedure in effect is to compute and approve grants and to encumber funds for the entire quarter and to notify the States of the amount of the quarterly grant. The States have likewise adopted definite operating procedures for the time and method of making payments to recipients which are dependent on our processes as well as on State and local governmental fiscal operations. States usually make payments to recipients for a month at the beginning of the month, regularly, and on set dates. Thus, recipients know when they may expect their checks and can plan to meet their needs and obligations accordingly. Any substantial change in the Federal process, such as the delay in certification of grants for the first quarter which would result from the proposed language, sets in motion a chain of actions involving States and local units of the government as well as the lives of needy public assistance recipients.

We therefore urge elimination of the House proviso with the assurance that we will make every effort to simplify the budget presentation next year.

SPECIAL LANGUAGE PROVISION

Mr. RONEY. I would like to comment on the special language provision as to making advances to the States.

Senator HILL. All right, sir. Proceed.

Mr. RONEY. The House, in acting upon this appropriation, approved in full the amount of the budget estimate. However, the committee report was critical of the budget presentation, particularly with respect to the way advances and adjustments were shown in the summary statement for the Department of Health, Education, and Welfare Chapter in the President's budget. Since adjustments between fiscal years are not in equal amounts, the picture on an obligational basis as reflected in this statement does not reflect the same fiscal requirements as would be indicated by the appropriations

for the same fiscal years. In order to correct this problem, which is largely one of presentation and bookkeeping, the House proposed language as follows:

Advances to States for the first quarter of the next succeeding fiscal year, as authorized in this act, shall not exceed the sum so advanced for the respective programs in the previous year.

Senator HILL. That would very definitely put a ceiling on what you could advance this first quarter, would it not?

Mr. RONEY. That is right, and the difficulty we have is that those amounts fluctuate from year to year and it could considerably interfere with our being able to make advances to the States according to their needs.

Senator HILL. Another thing, with the present recession, your demands might be greater than they were last year, is that right?

STATE DEMANDS

Mr. RONEY. I am sorry, Mr. Chairman, I did not catch that question.

Senator HILL. I said with the present recession your demands from the States might be greater than they were for the first quarter of last year?

Mr. RONEY. That is very much so.

Senator HILL. In other words, more of the people who have jobs that were not eligible, say, why, a year ago, would be eligible this year and we will have a greater proportion of them who would have to turn to public assistance; is that correct?

Mr. RONEY. That is right. For that reason we would like to see the language stricken and we would like to assure that we will make every effort to simplify the budget presentation next year in order to meet the matter that came up in the House.

PROBLEM OF BUDGET PRESENTATION

Mr. KELLY. I might add we are perfectly sympathetic with the problem the House ran into with the summary tables, the method of presenting the bookkeeping. We have been in touch with the Bureau of the Budget, and are confident, without this language, we can arrange a presentation for the budget that will not present the difficulties that the presentation did this year.

Senator HILL. You think you have it pretty well worked out?

Mr. KELLY. I think so.

Senator HILL. If there is anything else that you gentlemen would like to add to the record here, please let us have it, for this reason: When we take this language out, you gentlemen know that we have to go over to the House conferees on it, and we will have to justify our action and we want to be able to make out our case. So the record will not be closed for at least a couple of weeks, and if you have anything, please let us have it before then.

Mr. RONEY. Mr. Chairman, we have tried to give all the details in our more complete statement.

Senator HILL. All right. Your full statement will be made a part of the record at the beginning of your remarks.

Bureau of Public Assistance

SALARIES AND EXPENSES

STATEMENT OF MR. JAY L. RONEY, DIRECTOR, BUREAU OF PUBLIC ASSISTANCE, ACCOMPANIED BY MR. JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

"Salaries and Expenses, Bureau of Public Assistance

"[Salaries and expenses, Bureau of Public Assistance:] For expenses necessary for the Bureau of Public Assistance, [$1,900,000] *$2,040,000.*"

Funds available for obligation

	1958 appropriation		1959 estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
Appropriation or estimate	263	$1,900,000	288	$2,040,000	276	$1,980,000
Total obligations	263	1,900,000	288	2,040,000	276	1,980,000

Obligations by activities

Description	1958 appropriation		1959 estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Program policies and standards	52	$419,072	56	$446,860	56	$446,860
2. Review State plans and grants, evaluate State operations	155	1,109,279	161	1,146,240	161	1,146,240
3. Collect and interpret statistics	29	207,272	32	222,198	32	222,198
4. Emergency civil defense programs			12	60,000		
5. Administration	27	164,377	27	164,702	27	164,702
Total obligations	263	1,900,000	288	2,040,000	276	1,980,000

Obligations by objects

Object classification	1958 appropriation	1959 budget estimate	1959 House allowance
Total number of permanent positions	263	288	276
Full-time equivalent of all other positions	3	3	3
Average number of all employees	254	273	264
Number of employees at end of year	255	279	267
01 Personal services:			
Permanent positions	$1,578,000	$1,688,100	$1,637,000
Positions other than permanent	13,000	13,000	13,000
Other personal services	26,000	26,600	26,300
Total personal services	1,617,000	1,727,700	1,676,300
02 Travel	100,000	108,600	105,600
03 Transportation of things	3,000	3,000	3,000
04 Communication services	21,000	22,300	21,800
05 Rents and utility services	700	1,150	1,150
06 Printing and reproduction:			
Printing	13,000	14,000	14,000
Reproduction	15,000	16,400	16,000
07 Other contractual services	5,060	5,415	5,230
Services performed by other agencies	17,140	19,155	18,770
08 Supplies and materials	8,500	9,480	9,000
09 Equipment	2,000	4,400	4,100
11 Grants, subsidies, and contributions: Contribution to retirement fund	96,000	106,800	103,450
13 Refunds, awards, and indemnities	500	500	500
15 Taxes and assessments	1,100	1,100	1,100
Total obligations	1,900,000	2,040,000	1,980,000

Summary of changes

	Positions	Amount
1958 actual appropriation	263	$1,900,000
1959 base	263	1,900,000
1959 appropriation request	288	2,040,000
Net change requested	+25	+140,000

	1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount
Increases for mandatory items: Retirement contributions annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)		$4,000		$4,000
Subtotal		4,000		4,000
For program items:				
Program policies and standards to initiate work toward solving some of the most urgent problems in such areas as medical care and administrative and fiscal management, including working with State agencies in the study and improvement of efficiency and of their controls of administrative costs	4	26,878	4	26,878
Review State plans and grants, evaluate State operations for work in the area of administrative review of State and local operations, including efficiency and cost of administration	6	33,141	6	33,141
Collect and interpret statistics for assisting on studies in the area of medical care and for work related to analysis of administrative costs for State and local administration	3	14,481	3	14,481
Emergency civil defense programs to resume some of the priority work essential for planning the national emergency financial assistance and emergency clothing programs for the temporary relief of civilians injured or in want as a result of attack	12	60,000		
Other: For Bureau's share for participation in Department plans for completing establishment of minimum health units in all regional offices		1,500		1,500
Total change requested	25	140,000	13	80,000

EFFECT OF HOUSE ACTION

Activity 4. Emergency civil defense programs

The House deleted the request for $60,000 and 12 positions to reactivate the work of carrying out delegated civil defense activities relating to emergency financial assistance and clothing programs which were suspended at the end of fiscal year 1957. We are no longer requesting that this item be included in this appropriation. It is our understanding that the Administrator of Civil Defense will request the Independent Offices Subcommittee to include funds in the Federal civil defense appropriation for allocation to the agencies to whom certain civil defense functions have been delegated.

New positions requested, fiscal year 1959

	Grade	Annual salary
Activity 1. Program policies and standards:		
Division of Program Standards and Development: Medical assistance specialist.	GS-12	$7,570
Division of Technical Training: Staff development specialist	GS-12	7,570
Division of State Administrative and Fiscal Standards:		
Welfare methods specialist, administrative	GS-12	7,570
Clerk-stenographer	GS-4	3,415
Total new positions (4), activity 1		26,125
Activity 2. Review State plans and grants, evaluate State operations:		
Office of the Director: Correspondence clerk	GS-5	3,670
Division of Administration: Plans maintenance clerk	GS-4	3,415
Division of Program Operations: Central office: Administrative review specialist	GS-12	7,570
Regional:		
Public assistance technician (2)	GS-12	15,140
Clerk-stenographer	GS-4	3,415
Total new positions (6), activity 2		33,210
Activity 3. Collect and interpret statistics:		
Division of Program Statistics and Analysis:		
Research analyst	GS-12	7,570
Statistical clerk (2)	GS-4	6,830
Total new positions (3), activity 3		14,400
Activity 4. Emergency civil-defense programs:		
Office of the Director:		
Emergency welfare planning officer	GS-15	11,610
Secretary	GS-6	4,080
Division of Program Operations:		
Regional:		
Assistant regional representative, defense welfare services (5)	GS-12	37,850
Clerk-stenographer (5)	GS-4	17,075
Total new positions (12), activity 4		70,615
Total new positions (25), all activities		144,350

HOUSE ACTION

Senator HILL. Now, Mr. Roney, I understand you are going to cover this item on salaries and expenses also?

Mr. RONEY. That is right.

Senator HILL. The House reduced you how much?

Mr. TRUELSON. $60,000, which was the amount being asked for civil defense.

Senator HILL. In other words, that is in line with what has been done all through the bill.

Now is the amount the House allowed adequate to handle the situation?

Mr. RONEY. It is in line with our estimates this coming year.

Senator HILL. It is in line with your budget estimates?

Mr. RONEY. Yes, sir.

Senator HILL. In your general statement you go into more detail about that?

Mr. RONEY. Yes, sir.

Senator HILL. Is there anything else you would like to add?

NEED FOR ADDITIONAL POSITIONS

Mr. RONEY. I think not, Mr. Chairman, except to say that our need for the additional positions is substantial. We have tried to detail that and indicate how they will be used in our full statement.

Senator HILL. Well, the truth is your budget estimate was quite some bit under your request, was it not? Your request of the Budget was quite some bit under what the Budget allowed you; is that right?

Mr. RONEY. Yes, sir.

Senator HILL. And the allowance of the Budget was not very much over the allowance of the present fiscal year; is that correct?

Mr. RONEY. That is right. It is only for 13 positions after eliminating the civil defense request.

PREPARED STATEMENT

Senator HILL. All right. Thank you very much. Your whole statement will be made a part of the record at this point.

(The statement referred to follows:)

STATEMENT BY DIRECTOR, BUREAU OF PUBLIC ASSISTANCE

INTRODUCTION

During the past year there have been substantial accomplishments in the public-assistance programs. In the following report to the committee on these activities special attention has been directed to reporting on progress and problems in implementing the Social Security Amendments of 1956. Because they are designed to deal with social and health problems of assistance recipients, these amendments to the public assistance title of the Social Security Act are among the most constructive that have been adopted since the beginning of the programs. The medical care amendments are intended to encourage States to extend and broaden medical services for public assistance recipients by providing for a separate formula for Federal matching of payments to suppliers of medical care. The statements of purpose in all four public-assistance programs were amended to make clear that, in addition to enabling States to give financial assistance to needy people, the legislation has the purpose of encouraging States to furnish appropriate social services to help assistance recipients toward independent living. The amended statement in the aid to dependent children title emphasizes that a goal of the program is to help maintain and strengthen family life and to help keep children in their own homes.

It will be a continuing and long-range task of the State public assistance agencies and the Bureau of Public Assistance to work toward fulfillment of these goals.

MAJOR ACCOMPLISHMENTS IN IMPLEMENTATION OF 1956 AMENDMENTS

The major focus of activities at both the Federal and State levels since August 1956 when the 1956 amendments were passed was on implementing the amendments. The impact of increased program responsibility resulting from these legislative changes was very substantial. While the Bureau has about the same level of staffing for the current fiscal year as in recent years, there was nevertheless progress made in carrying out additional responsibilities. Many of the Bureau's activities continue to be carried by a smaller staff than that considered desirable for fulfilling responsibilities under the Social Security Act. For example, in the field of medical care, only about 40 percent of the requests for regional and State consultation identified as needed this year can be met. Many State requests for technical assistance in the staff development, administrative management, and

fiscal as well as other areas must be deferred and/or limited in scope. In relation to work in implementing the 1956 amendments during the past year, primary effort was placed on the interpretation of the law, issuance of basic policies for the use of States, and identifying and beginning work on major issues that needed to be resolved. Fiscal and administrative procedures were developed to effect the necessary changes in grants to States, and technical assistance was provided to State agencies in carrying out the purposes of the new legislation. In addition, the Bureau issued information explaining the amendments to groups and individuals concerned with them.

Significant developments in the assistance and services available to needy persons are made possible by these amendments. Their full potentials will not be realized until the States have had more time to put the legislation into operation, but significant progress is already evident. Of special interest are such developments as the increase in assistance payments, improvement of medical care for assistance recipients, and strengthened social services.

INCREASE IN ASSISTANCE PAYMENTS

As a result of raising both the Federal share of State public assistance payments and the maximum payment subject to participation, effective October 1, 1956, through June 30, 1959, all but a few States increased individual payments by $3 to $4 a month for the needy aged, blind, and disabled; and by $1 to $2 for each person receiving aid to dependent children. The availability of additional Federal funds made it possible for many States thus to make long overdue adjustments in payments in relation to increased living costs.

IMPROVEMENTS IN MEDICAL CARE FOR PUBLIC ASSISTANCE RECIPIENTS

The cause of dependency for many assistance recipients is directly related to disabling effects of illness. For example, of the 2.5 million persons 65 years of age or over receiving old-age assistance, nearly half are 75 or over—an age group with a high incidence of chronic illness. Disability itself is a basic eligibility condition for the 289,000 needy persons receiving aid to the permanently and totally disabled, the 108,000 persons receiving aid to the blind, and for the approximately 500,000 children and 127,000 adult caretakers who receive aid to dependent children because of the physical or mental incapacity of a parent. Illness and disability also play a large part in the need of many of the 312,000 cases receiving State and/or locally financed general assistance. In addition, more than one-half of the patients in nursing homes in the country are public assistance recipients.

The availability of additional Federal matching in medical care costs, effective July 1, 1957, provided the stimulus for extensive planning and preparation on the part of both Federal and State agencies during the year. At the Federal level, discussions were held with representatives of various groups to interpret the provisions of the amendment and to get the benefit of their specialized knowledge and suggestions for its implementation. These groups, among others, included the American Medical Association, American Hospital Association, and American Nursing Homes Association. In addition, discussions occurred with the American Public Welfare Association and considerable consultation was provided to State public welfare agencies in the form of regional meetings with States and working sessions in State offices. Within the Department, discussions have been held with other agencies with medical programs to assure the most effective cooperative relations. In June, representatives of interested national organizations and staff of State public assistance agencies came together in Washington to discuss the problems and questions which had arisen around the implementation of this amendment.

The 1956 medical care amendment, however, tended to affect adversely a few States which had previously been able to make substantial vendor payments for medical care within the Federal matching maximums on individual assistance payments. To avoid a loss in Federal aid to the States, Public Law 85–110 was passed in July 1957 to give the States an option with respect to the basis for claiming Federal participation in their vendor payments for medical care. States on an annual basis may choose to receive Federal matching funds for their vendor payments for medical care under the formula enacted in 1956 or they may elect to receive Federal funds on the basis of the formula in effect prior to the change made in 1956. Two States—Illinois and New Hampshire—exercised this option for fiscal year 1958 for medical care in some of their programs.

While the provision for separate Federal matching in vendor payments for medical care will not permit Federal participation in comprehensive medical

services for assistance recipients, it has enabled some States with no statewide provision for medical care to begin to pay the cost of some medical services; and other States have been enabled to expand their existing medical care provisions. As of April 1, 1958, 39 State agencies (in 37 different States) had submitted plans for providing medical care through vendor payments for one or more categories:

1. Amendments to State plans have been received from 15 State agencies which have not previously had plan provisions to permit vendor medical payments.
2. Eleven State agencies which had included medical care in one or more programs prior to July 1, 1957, have extended their medical services.
3. Thirteen State agencies are continuing the programs that were in operation before July 1, 1957.

Some of the new plan provisions are from States with limited funds and provide mainly for hospitalization for life-endangering illnesses. Other States are beginning with payments for physician's services, drugs, and nursing-home care where hospitalization is already available through existing facilities or programs. As more experience is gained in determining cost figures and in handling other administrative aspects of medical care in public assistance, some of these States may be able to extend their coverage.

The States have sought Bureau help on many problems of medical care with which they are concerned. I shall give a few illustrations:

1. In addition to the provisions necessary to assure that their medical payments will be matchable, States need help in working through problems (such as broadening, contracting, or making more effective provisions for medical care) and in solving problems that come up in the course of operations. In the latter phase the Bureau, because of staff shortages, has had to refuse or postpone the technical assistance requested by States. Only the most urgent consultation is performed and it usually relates to the establishment of new provisions.
2. There is need to obtain and to study information about public assistance medical care for the use of States. Also there is a need to utilize specialists to study difficult problems so that a plan may be developed for a solution. For example, nursing-home care is already costly, and it is becoming even more expensive. Nevertheless, little has as yet been done to relate the cost of care to the actual services rendered, and to develop plans that can be followed by caseworkers in planning with recipients as to whether nursing-home care is needed or whether an alternative is possible.

STRENGTHENED SOCIAL SERVICES FOR NEEDY PEOPLE

The public assistance program is the only welfare program operating in every community in the Nation, and it has, therefore, the greatest opportunity for the continuing development of services that affect the lives of the most needy segment of the Nation's population.

The passage of the 1956 amendments relating to services provided the stimulus for renewed and more effective activities on the part of State agencies. Effective July 1, 1957, the law requires that State plans describe the services made available by the State agency and the steps taken to assure maximum utilization of similar or related services furnished by other agencies.

In developing materials relating to services, the Bureau enlisted the help of a national advisory committee. This committee included representatives from State and local public welfare agencies, national voluntary agencies, graduate schools of social work, and staff from other units of the Department. The committee dealt with some interesting problems. For example, how are services to be defined? What is self-support? What is required to strengthen family life? What services should be provided by the public assistance agency itself and what services should be sought from other community agencies?

Similarly, a 2-day national conference on homemaker service was held in June 1957 under the joint auspices of the Children's Bureau, the Bureau of Public Assistance, and the Public Health Service, to stimulate the further development of homemaker service. Some progress is being made in the use of this service to release family members caring for assistance recipients to seek gainful employment; to permit the chronically ill, the emotionally handicapped, the physically disabled, and the aged to remain in their own homes as long as possible; and to maintain a home for dependent children when the mother is ill or otherwise temporarily unable to care for them.

In addition, under the auspices of the National Social Welfare Assembly, a meeting was held with representatives of national voluntary agencies. The

participants considered ways in which voluntary and public social welfare agencies can work together in developing and providing the services needed by families receiving aid to dependent children.

The States' Vocational Rehabilitation Council Committee on Relationships With Public Assistance also met in Washington in April 1957. Representatives of both the Bureau of Public Assistance and the Office of Vocational Rehabilitation took the opportunity to explore ways in which State agencies of both programs can work more cooperatively and effectively. Similar discussions were held between State vocational rehabilitation and public assistance agencies.

Progress toward the most effective use of all these resources was reflected in many State plans along with defining more clearly the services offered by the State. Some State plans provide special help to the handicapped, homemaker service for the ill and aged, and/or foster care for the ill or aged unable to live alone but not in need of custodial care. Although there is great variation in the range of problems on which States offer services, certain common areas are recognized by most States—the effects of financial need, illness, family relationships, and lack of education and training for employment.

Many problems remain to be solved in the administration of social services, however. All parts of the country are struggling with the knotty problem of how to deal with desertion, illegitimacy, and divorce; factors which bring so many children to the public assistance program. Some communities have used a constructive approach, based on the unspectacular but proven methods of the social welfare agencies: casework, group work, community organization, research, public interpretation, and the like. A few communities have used repressive measures in an attempt to solve these social problems. The aid to dependent children program, like all other public assistance programs, deals with the consequence of community neglect. Inadequate schooling, poor health facilities, and other deficiencies in community consideration for people in various parts of the country have their effects on public assistance. The nation cannot look for any substantial reduction in the need for assistance until these deficiencies are corrected in the country as a whole.

The increasing proportion of older people in our population also brings new problems to the Nation. Since the beginning of old-age assistance, the Bureau has had an unique opportunity to acquire knowledge of the problems and needs of the aging. State welfare departments, in providing assistance to aged persons on the basis of their individual needs, secure comprehensive information on their housing and health conditions, their capacities and interests in employment, and their problems in family and community relationships. To the full limit of available staff the Bureau has provided technical help to the States in developing needed social services and has participated with national groups in planning to meet the challenge of the aging.

The major social services required by the needy aged are: help in remaining in their own homes as long as possible, and, when no longer possible, help in securing suitable care in foster boarding homes or nursing homes; help in learning about and in using community resources designed to meet their health, employment, vocational needs; help in making best use of their assistance payments; and help with problems of family relationships. More and more State and local welfare departments are attempting to meet some of these needs. In addition they are providing leadership in their State and local communities in organizing committees for broad planning regarding all aging persons. Of particular con cern are the problems of the aged who live in substandard housing; the aged with varying degrees of senility who need protective services; the ill or physically handicapped who need such home care as visiting-nurse service; the inadequate standards of many of the sheltered care facilities and the increased costs of adequate sheltered care. There is also concern with developing ways of helping the aging. Many aged people are without families and friends and, therefore, need help in developing ways to maintain satisfying and useful lives.

The Bureau's current activities in collecting and analyzing data on nursing or convalescent homes providing care for public assistance recipients is of interest in relation to past studies made by us in the sheltered care area. In the early 1940's the Bureau carried out the first national study on sheltered care and home services for public assistance recipients. In this early period, the Bureau also took the leadership in holding the first meeting of representatives of national voluntary organizations, sectarian and nonsectarian, to consider the needs of the aging. This activity resulted in the formation of the first National Committee on Aging. This committee, now under the National Social Welfare Assembly, is still a major force in planning for the aged.

Because of these early activities and because of the potentials of the public assistance programs in serving the aging, the participation of the Bureau is solicited by a variety of national organizations and by the organized committees on aging of the American Public Welfare Association and the National Social Welfare Assembly. The Bureau has had regular representation on these committees and on the Committee on Aging of the Social Security Administration since their formation. Considerable staff work is also performed for the Department Committee on Aging. In this way the Bureau is able to bring to these planning groups its knowledge of the special problems of the needy aged, often overlooked, and to enlist Committee participation in planning to meet their total needs.

With increasing recognition of the need for social services has come greater awareness of the direct relationship between the quality of services provided and the skill of staff providing them. Yet only about 20 percent of staff in social work positions in public assistance agencies have any social work training, and only 4 percent have completed professional training.

Intensive effort was made by the States during the past year to expand and strengthen their training programs. Their training plans are based on principles underlying long-range development plans developed by the Bureau. Many of the States requested Bureau consultation and written materials on staff development. Many held short-term courses to strengthen the skill of administrative and supervisory staff in helping workers to administer medical care provisions and to provide other social services. Several institutes were held by the Bureau for State staff in the uses of the group process-in-training programs.

HIGHLIGHT SUMMARY OF WORK PROGRAM FOR 1959

It cannot be too often repeated that the basic mission of the Bureau is to carry out the primary objective of assisting States to provide assistance equitably, economically, constructively, and adequately in accordance with State public assistance plans.

The increase of $80,000 and the 13 positions allowed by the House would enable the Bureau to increase its efforts in assisting the States in working toward achievement of this objective. Implementing the 1956 social security amendments will have a continuing impact on the Bureau's work. Summarized below are illustrations of proposed work for 1959 by major budget activities.

1. *Program policies and standards.*—An increase of 4 positions and $27,788 is being requested for this activity to enable the Bureau to undertake work toward solving some of the most urgent problems—many of which I've already mentioned—in the various subject areas within this activity. As an illustration, to help States deal with problems being encountered—in relation to high costs for nursing home care—experience that has proved satisfactory in selected States should be made available for use of all States. The opening statement on the appropriation request for "Grants to States for public assistance" mentions the report prepared by the Department on cost of State and local administration which contains Bureau work planning in this area for 1959 and subsequent years. Assuring that administrative costs are kept at the minimum level necessary for effective and economical administration and for carrying out the objectives of the 1956 amendments to extend and improve services, points up the crucial need for additional Bureau staff if current problems are to receive proper attention.

2. *Review State plans and grants, evaluate State operations.*—Under this activity, we are requesting an increase of $36,961 and 6 positions. This increase is requested so that more attention may be directed to the administrative review of State and local operations and to handle the increased work in the inquiry and the State plans maintenance area. In the administrative review plans for 1959, major attention will be given to evaluation of administrative methods and procedures in State and local agencies and to securing information on State practice for use in strengthening State supervision of local agencies. The Bureau will continue its policy of advancing more efficient and effective administration of public assistance programs through the use of findings from the review of State and local administration. There has been—and will continue to be—very limited staff time for review of Federal requirements other than eligibility and amount of payment. The scope of the review should be expanded to assure compliance with the social security amendments of 1956; to review special problems in individual States; and to obtain facts on specific subjects in areas needed for policy development.

3. *Collect and interpret statistics.*—The increase of 3 positions and $14,926 for this activity will be devoted to studies undertaken to obtain basic information about the effect of State policies and practices on needy people, on the national

welfare and on the administration of the public assistance programs. Information, developed cooperatively with the State public assistance agencies, is basic to attainment of program objectives, including effective and efficient State and local administration. Current studies and reports, as well as illustrations of those that should be undertaken, are described in the detailed justification statement. Therefore, an illustration is just two subject areas, medical care and aging, follows. As a basis for planning future research concerning medical care provided under public assistance programs, it is essential that comprehensive and systematic information be developed on the kinds of medical care data currently produced by State agencies. A survey form will be developed to obtain this information, as well as State agency judgments regarding the value of such data and the kinds of additional statistical information on medical care that is needed for program planning and operation. Such data will then be tabulated and analyzed for administrative use and research planning. A study has also been initiated to measure the effect on public assistance of the 1956 old-age and survivors insurance amendments. Discussions are being held with the Bureau of Old-Age and Survivors Insurance to determine the feasibility of planning a joint study on the characteristics of recipients of public assistance who also receive old-age and survivors insurance benefits. The Social Security Administration, as well as both Bureaus, need more information than is now available—for administrative use and for interpreting the relationship between the assistance and insurance programs.

EFFECT OF HOUSE ACTION

The total request for 1959 of $2,040,000 and 288 positions represented an increase of $140,000 and 25 positions.

Of this increase, $60,000 and 12 positions were requested for reactivation of work in carrying out the delegated civil defense activities relating to the public assistance programs. These civil defense activities of the Bureau of Public Assistance, which related to planning emergency financial assistance and clothing programs, were suspended as of June 30, 1957, upon termination of the appropriation to the Federal Civil Defense Administration for delegated civil defense activities.

We are no longer requesting that the 12 positions and $60,000 for civil defense activities be included in this appropriation. It is our understanding that the Administrator of Civil Defense will request the Independent Offices Subcommittee to include the funds in the Federal civil defense appropriation for allocation to the agencies to whom certain civil defense functions have been delegated.

The appropriation allowance of $1,980,000 and 276 positions allowed by the House will enable the Bureau to more effectively carry out its increased program responsibilities in continuing work with State agencies to improve the public assistance programs.

CHILDREN'S BUREAU

SALARIES AND EXPENSES

STATEMENTS OF MRS. KATHERINE B. OETTINGER, CHIEF, CHILDREN'S BUREAU, ACCOMPANIED BY JAMES F. KELLY, DEPARTMENTAL BUDGET OFFICER

APPROPRIATION ESTIMATE

"SALARIES AND EXPENSES, CHILDREN'S BUREAU

"[Salaries and expenses, Children's Bureau:] For necesssary expenses in carrying out the Act of April 9, 1912, as amended (42 U. S. C., ch. 6), and title V of the Social Security Act, as amended (42 U. S. C., ch. 7, subch. V), including purchase of reports and material for the publications of the Children's Bureau and of reprints for distribution, [$2,000,000] *$2,013,000: Provided,* That no part of any appropriation contained in this title shall be used to promulgate or carry out any instructions, order, or regulation relating to the care of obstetrical cases which discriminate between persons licensed under State law to practice obstetrics: *Provided further,* That the foregoing proviso shall not be so construed as to prevent any patient from having the services of any practitioner of her own choice, paid for out of this fund, so long as State laws are complied with: *Provided further,*

That any State plan which provides standards for professional obstetrical services in accordance with the laws of the State shall be approved."

Funds available for obligation

	1958 appropriation		1959 budget estimate		House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
Appropriation or estimate	252	$2,000,000	252	$2,013,000	250	$2,000,000
Unobligated balance, estimated savings		−32,200				
Total obligations		1,967,800		2,013,000		2,000,000

Description	1958 appropriation		1959 budget estimate		House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. State and local health services for children	84	$686,086	84	$686,086	84	$686,086
2. State and local social services for children	47	368,286	47	378,255	47	378,255
3. Technical assistance to States and communities for juvenile delinquency programs	19	149,524	19	165,783	19	165,783
4. Research in child life and services for children	45	288,039	45	300,291	45	300,291
5. Information for parents and others working with children	22	255,821	22	255,821	22	255,821
6. Administration	35	220,044	35	226,764	33	213,764
Total obligations	252	1,967,800	252	2,013,000	250	2,000,000

Obligations by objects

Object classification	1958 appropriation	1959 budget estimate	House allowance
Total number of permanent positions	252	252	250
Full-time equivalent of all other positions	1	1	1
Average number of all employees	227	230	228
Number of employees at end of year	236	236	234
01 Personal services	$1,536,131	$1,575,000	$1,563,340
02 Travel	147,120	151,800	151,300
03 Transportation of things	1,500	1,500	1,500
04 Communication services	25,457	25,800	25,730
05 Rents and utility services	500	500	500
06 Printing and reproduction	122,000	122,000	122,000
07 Other contractual services	4,300	4,300	4,300
Services performed by other agencies	11,256	11,300	11,278
08 Supplies and materials	15,322	15,500	15,450
09 Equipment	10,700	10,700	10,198
11 Grants, subsidies, and contributions: Contributions to retirement fund	92,914	94,000	93,888
15 Taxes and assessments	600	600	516
Total obligations	1,967,800	2,013,000	2,000,000

Summary of changes

	Positions	Amount
Total 1958 actual appropriation	252	$2,000,000
Deduct nonrecurring equipment costs		−2,793
Deduct reserves		−32,200
1959 base	252	1,965,007
1959 appropriation request	252	2,013,000
Net change requested		+47,993

Summary of changes—Continued

	1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount
Increases for mandatory items:				
Retirement contributions annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)	----------	+$3,716	----------	+$3,604
Annualization costs for 11 additional positions authorized in 1958	----------	+44,277	----------	+37,669
Subtotal	----------	+47,993	----------	+41,273
Decrease for program items: Liaison between White House Conference and Bureau's on-going programs	----------	----------	−2	−6,280
Total change requested	----------	+47,993	−2	+34,993

EFFECT OF HOUSE ACTION

Activity 6. Administration

The House allowed 33 positions and $213,764 for this activity as compared with 35 positions and $226,764 in the request and 35 positions provided by the 1958 appropriation. The House eliminated two positions which were established under the 1958 appropriation to perform the preliminary planning for the 1960 White House Conference on Children and Youth. A separate appropriation is being requested in 1959 for planning the White House Conference, and has been approved by the House. The elimination of the two jobs in the Office of the Chief results in the present staff of the Chief's Office absorbing the anticipated additional load of work involved in maintaining liaison between the Bureau's regular programs and the White House Conference activities.

PREPARED STATEMENT

Senator HILL. Mrs. Oettinger, we are glad to have you here. We welcome you and we would be glad to have you proceed in your own way.

Mrs. OETTINGER. It is nice to be here, Mr. Chairman.

I would like to submit, for the record, a more detailed statement and then try to summarize for you just three items.

Senator HILL. All right. You do that, and your full statement will appear in the record.

(The statement referred to follows:)

STATEMENT OF CHIEF, CHILDREN'S BUREAU

FUNCTIONS OF THE CHILDREN'S BUREAU

The legal authority under which the Children's Bureau serves the children of the United States is contained in the basic act of April 9, 1912, creating the Bureau (42 U. S. C., ch. 6) and in title V of the Social Security Act under delegations by the Secretary of the Department of Health, Education, and Welfare, and the Commissioner of Social Security (42 U. S. C., ch. 7, subch. V).

Under its basic act of 1912, the Bureau is charged with investigating and reporting "upon all matters pertaining to the welfare of children and child life among all classes of our people." The Bureau studies many types of conditions affecting the lives of children, provides data, and makes recommendations to improve practices in child health and child welfare programs, and helps establish standards for the care of children.

Under title V of the Social Security Act, the Bureau administers grants to States for three programs: (1) maternal and child health services, (2) crippled children's services, and (3) child welfare services. For these programs, the Bureau develops policies, reviews, and approves State plans and budgets, and provides technical consultation to State agencies in carrying out their plans.

SIGNIFICANT TRENDS

1. In 1957, children under 18 constituted nearly 35 percent of the Nation's population, the highest proportion at any time in the last quarter century. The child population is continuing to increase. By 1965, it is expected that there will be 70 million children under 18 in the United States, and increase of 27 percent within the 1955–65 decade.

2. The number of working mothers with children under 18 is now at an all-time high of more than 6,700,000. This means that 1 of every 4 women who work is a mother with minor children. This is a component part of the revolution in the employment of women which has taken place during the present century.

3. Approximately 2 percent of the more than 20½ million children 10 to 17 years of age were brought to juvenile courts for delinquent behavior in 1956. Between 1955 and 1956, there was a 21 percent increase in juvenile delinquency cases before the juvenile courts.

4. Only about 5 percent of the mentally retarded children in the Nation are in institutions. The remainder are in their own homes and communities. There is an increasing community concern that the needs of special groups of children such as these should be met.

5. There is an upward trend in the awareness of the need for constructive community planning to meet the needs of all children.

In the light of conditions such as these, the Children's Bureau programs put heavy stress on the prevention of those conditions which adversely affect the health and welfare of children through helping communities adapt their programs to changing conditions.

Through those programs for which the Children's Bureau carries responsibility, as well as through cooperative relationships with a wide variety of public and voluntary organizations, the Bureau tries to help the Nation move forward in expressing its concern for the well-being of all children.

For example, there are 11 major branches of the Federal Government with 34 units which have programs related to children. Representative of these groups meet as the Interdepartmental Committee on Children and Youth. The Children's Bureau provides the secretariat of this committee. Both in the exchange of information and in the stimulation and strengthening of cooperative relationships in programs concerning children, this committee has proved an effective mechanism.

Through it, the Bureau is in close touch with the National Council of State Committees for Children and Youth, composed of both State and Territorial committees which give leadership to programs for children and youth. In turn, the Interdepartmental Committee is a clearing house of information for the National Council.

Through this secretariat, the Bureau works closely with the Council of National Organizations with a membership of over 200 national professional and voluntary health and welfare agencies whose programs include concern for the well-being of children.

These three groups, the Interdepartmental Committee, the National Council of State Committees for Children and Youth, and the Council of National Organizations meet annually in a joint conference to discuss progress in programs for children.

White House conferences on children have been called by the President of the United States every decade during this century. The Children's Bureau has been the central point within the Government for planning and organizing these conferences. It is requesting funds under a separate appropriation for 1959 for planning a 1960 White House conference.

The effectiveness of the ongoing coordinated relationships which exist between the Bureau and these various State and national groups was demonstrated by the 1950 White House Conference on Children and Youth, at which a wide variety of professional interest in children, representing a national cross-section, was expressed.

PROGRAM EMPHASES IN 1958 AND 1959

Great population, economic, and social changes are occurring in our country. Gaps do exist in what is being done and needs to be done for children. The Bureau's long-range plans take into account these changes and gaps. Its immediate plans must be selective, within its broad mission, and fashioned to its limited resources.

Following is a résumé of principal activities to be undertaken in 1958 and 1959 which the Bureau regards as of highest priority in its ongoing programs.

State and local health services for children

Rapid advances in medical knowledge, the rising child population, rising costs of medical care, and population shifts which bring large groups of people to previously unsettled areas are factors which affect health services throughout the Nation.

In administering grants for maternal and child health and crippled children's services under title V, Social Security Act, the Bureau's health services staff is working with State maternal and child health and crippled children's agencies in every State in meeting those problems which such changing conditions bring.

The Bureau's health services staff is composed of a team of specialists in medical and related fields, such as pediatrics, nursing, dentistry, physical therapy, medical social work, nutrition, and mental retardation.

These staff members are available to the States for consultation and also work with national voluntary organizations whose programs concern the health of children.

A number of States are becoming interested in including in their crippled children's programs care of children who have cystic fibrosis, a relatively little known crippling condition in children. The prognosis for children who have this condition can be materially improved if it is recognized early and continuous and proper medical treatment and followup are available. Some States are attempting to develop an adequate program of diagnosis, hospitalization, and medication for this condition as part of their broad program of services for handicapped children.

Research in such fields as congenital heart disease, amputations, and speech and hearing handicaps is providing new and greatly improved methods of diagnosis and care for children with these conditions. The Bureau's health staff is continuing to work with the States in helping them provide services so that these handicaps can either be corrected or mitigated.

The Bureau provides consultation and program material to the States to help them maintain high standards of care in the well child and maternal health clinics which they conduct. Significant preventive steps can be taken to safeguard the emotional health of children when they are seen early in such settings.

The Bureau's specialist in physical therapy has worked closely with governmental and voluntary agencies which have been developing new techniques and prosthetic devices for the use of amputees. Within the past few years, the knowledge gained through World War II experience with veterans has been applied in developing such devices for children.

New and greatly improved methods of hospital care for newborn infants have been developed within recent years. Bureau staff are constantly at work in developing guide material which can be used throughout the country in keeping abreast of new developments in fields such as this.

In revising the hospital care guide material to incorporate new knowledge, the Bureau is again working cooperatively with the American Academy of Pediatrics, the American Public Health Association, the American Hospital Association and the National League for Nursing.

The Bureau will continue to provide technical assistance to the States in developing and extending child health programs for mentally retarded children which will not only provide diagnostic, psychological and casework service but also will be coordinated with education, vocational rehabilitation, child welfare and other community programs serving these children.

In carrying forward this activity, the Bureau will continue to plan with other Federal agencies, participate in the Department's Committee on Mental Retardation, and work with other national organizations, such as parents' groups, that are active in these programs.

The Children's Bureau held four regionwide conferences on mental retardation during the fiscal year 1957. Twenty-four States and Territories participated in these conferences, in which concepts and problems relating to mental retardation were presented. In addition, working sessions were held which considered the actual operation of clinic services. Six State health departments also organized and called their own statewide conferences to consider the same aspects on a State and local level. Both the regional and State conferences included not only health personnel but also personnel of departments of education, welfare, and institutions as well as representatives of parents' groups.

Wide variation exists in speech and hearing programs of State agencies. Only about half of the State health and crippled children agencies are engaged in such programs. They vary from audiometric testing of school children to comprehensive programs for conservation of hearing. In most States, programs for hard-

of-hearing children, especially those of preschool age, are very inadequate. The deterioration of hearing in many children may frequently be halted and normal hearing restored through prompt attention. Where hearing loss is permanent, with early diagnosis, care, and training, children may often be helped to lead normal lives. The Children's Bureau is giving particular attention to helping States develop these programs.

The families of migratory agricultural workers present special and difficult problems because of low income, mobility, lack of residence status. Disease and mortality rates are high among them. Bureau staff will assist the States in the extension of their maternal and child health and crippled children's services to migrant mothers and children.

The kinds of services States are encouraged to provide include clinics for mothers and babies, increased public health nursing so that migrant camps can be served, advice on feeding, and health education materials adapted to special cultural groups. Particular efforts will be made to increase understanding in these families about the basic facts of health and the importance of making use of clinics and other available health services.

Children's Bureau personnel are providing technical consultation in pediatrics and maternal and child health in Indian reservations, hospitals and clinics to improve the quality of services, under a reimbursable agreement with the Public Health Service. The Bureau staff participate in surveys of health of Indians and provide help in other ways to improve health services for Indian mothers and children.

State and local social services for children

To a large extent, the trends that are having such a significant impact on health services for children are requiring similar modifications in developing social services for children. In administering grants to the States for child welfare services, under part 3 of title V of the Social Security Act, Bureau staff are constantly asked for help in answering such questions as: How can services for the care of runaway children be improved? What measures have been found effective for continuing cooperation between voluntary and public child welfare agencies? What can be done to alleviate the black market in babies? How can State laws offer better protection to children who must be cared for away from their own homes? These are only illustrative of the kinds of help the Bureau's child welfare staff are asked to give throughout the country.

If the needs of the burgeoning child population are to be well served, long-range planning must take place. States are taking a fresh look at their child welfare legislation. Some State laws do not contain adequate provisions for the protection of children or do not make provision for a public child welfare program broad enough in scope to meet the needs of today's families and children.

In many States, legislative commissions, State planning committees, or the State public welfare agencies themselves are asking the Bureau for help not only on legislation, but also on organization, administration, or community planning for child welfare. The Bureau is giving major attention to meeting these requests by developing guide materials in this field and by providing advisory help to the States.

Child welfare agencies, as well as industry and the professions, are suffering from the competitive squeeze for the professional personnel they need to staff their programs. For the child welfare agencies, the shortage is of long-standing duration—more than a quarter of a century.

Greater effort is being made to train the child welfare staff available, and to develop long-range plans for securing more staff.

The Children's Bureau is being called upon to help the States plan and carry out training programs for child welfare workers, particularly supervisory staff. Last year the Children's Bureau and the Bureau of Public Assistance jointly sponsored a seminar to help State training consultants acquire more understanding of educational principles and their use in group teaching.

Bureau staff are being called upon to an increasing extent to conduct institutes and other group training activities which emphasize social services to children in their own homes and protective services for neglected or abused children.

They are also working closely with the Council of Social Work Education and other professional groups to make social work training responsive to new knowledge about child life and changing needs in agency programs.

A wide variety of high quality services must be available in child welfare programs if children are to receive the kind of help they need. The Bureau is helping States develop new ways of bring services to children and their families and of improving the quality of those services.

The preventive focus of all the Children's Bureau programs is illustrated by its concern with social services for children in danger of becoming delinquent. Many communities are finding that their services in this area are grossly inadequate and are seeking the Bureau's help in broadening their activities to make better provision for this group of children.

The Bureau is emphasizing the development of homemaker services as a way of preserving a child's own home in times of crisis, such as illness of the mother. Responsibility is focused in the Bureau for the activities of an interagency committee which, during 1958, will collect nationwide information on practices in homemaker and related services. Late in 1958 or early in 1959 a national conference to stimulate development of homemaker services throughout the country will be held. It will be sponsored jointly by the Children's Bureau, the Bureau of Public Assistance, the Bureau of Old-Age and Survivors Insurance, the Public Health Service, the Office of Vocational Rehabilitation, and national voluntary health and welfare agencies.

The Bureau will continue to provide help to States in strengthening foster care programs for children who must live outside of their homes. Our regional foster care consultants and the special consultants on foster care are finding State agencies worried about the number of infants remaining in institutions or boarding homes for long periods without plans for permanent care, about the large proportion of children received for foster care because of severe neglect or abuse and about the questionable long-time care of some children in institutions.

Agencies are asking for help in reexamining and improving their practices in adoption placement. Agencies are finding that infants can be placed earlier for adoption. Many children, once thought to be unadoptable are now being placed for adoption—older children, children with physical handicaps and children of mixed races.

In May 1957, the Children's Bureau called a meeting of social workers to define the role of the social worker in adoptions and to consider what social agencies should do with respect to independent placement for adoption. In November 1957, a similar meeting was held with physicians, and a meeting with attorneys will be held in the near future.

The need for social services for mentally retarded children is receiving increased attention in may States. The Bureau is beginning a study of social services available through public welfare departments to mentally retarded children and their parents. After this study we will know more about the kinds of services needed and the special skills workers need to provide these services. Curriculums of schools of social work and in-service training programs of agencies are being examined cooperatively with national organizations, such as the Council on Social Work Education, and the National Association for the Mentally Retarded, to ascertain the extent to which workers have the required knowledge and skills.

The Bureau is concerned about the kind of care children are receiving whose mothers are going to work in increasing numbers. This concern is shared with other Bureaus of the Department, particularly the Bureau of Public Assistance and the Bureau of Old-Age and Survivors Insurance. The Children's Bureau is heading a committee of representatives of these Bureaus to determine if any policies or principles need to be developed for use by the Social Security Administration in relation to working mothers.

Technical assistance to States and communities for juvenile delinquency programs

The number of juvenile delinquency cases before the juvenile courts more than doubled between 1948 and 1956. The Bureau must continue to give major emphasis to providing technical services to States and local communities on strengthening their services for delinquent youth if progress is to be made in meeting this problem.

The Bureau's staff of experts in this field includes consultants on police services, juvenile court and probation services, institutional care, community planning, and training of personnel. This staff cooperates with national voluntary agencies and with Federal agencies in providing leadership throughout the country, and provides technical assistance to States and communities in planning the extension, improvement, and more effective coordination of the various State and local services and facilities required for the location, treatment, and rehabilitation of delinquent youth.

For example, during 1957 the consultant on institutional care provided consultation to 35 institutions in 17 States, including boys and girls training schools, diagnostic and reception centers, detention homes, and a residential treatment

center. Since January 1, 1955, a total of 121 different institutions in 35 States and the District of Columbia have been visited by this consultant.

Another consultant provides consultation on juvenile court legislation, structure and organization of juvenile court and probation services, legal and treatment procedures, and coordination of court and probation services with the activities and services of other agencies in the community serving them.

The greatest problem in the field of services for juvenile delinquents continues to be the lack of trained staff. Consequently, the Bureau is giving particular attention to helping States develop and carry out training activities for improving the quality of service of staff engaged in services for delinquent youth.

In 1957, the Children's Bureau was cosponsor of a project at Rutgers University for personnel in institutions for delinquent youth who are responsible for training of personnel. Other cooperating agencies were the National Association of Training Schools and Juvenile Agencies, the National Probation and Parole Association, the Council on Social Work Education, and Rutgers University. The purpose of this project was to improve in-service training within these institutions. Another project at the same university will be carried out during the coming year for superintendents of institutions for delinquent youth. The purpose of this project is to help these institutions evolve from custodial to treatment institutions.

In recent years, programs to reach and help hostile antisocial youth gangs have multiplied rapidly across the country. An increasing share of available agency time, money, and personnel have been going into these programs in many urban areas where there are organized gangs of youth. There has been very little formulation of theory or practice to guide these programs nor research to evaluate their effectiveness. Consequently, in response to a widely voiced need to begin formulation of guidelines and evaluation of programs, the Bureau sponsored last year a 4-day conference on youth groups in conflict. Three national voluntary organizations cooperated as cosponsors, i. e., the National Social Welfare Assembly, United Community Funds and Councils of America, and the National Association of Social Workers. The conference provided a much needed opportunity for communication among specialists in this area throughout the country. A beginning was made in formulating principles of sound practice and subject areas for further study were delineated.

This is but one example of emerging new programs which the Bureau is helping to explore and develop in our effort to meet this problem.

Research in childlife and services for children

In carrying out its function to "investigate and report" upon matters pertaining to the welfare of children, the Bureau attempts quantitatively and qualitatively to determine how children in the United States are faring, and what physical and social conditions are inimical to their well-being.

Quantitatively, and on a regular basis, the Bureau assembles data to answer such questions as:

How many children are adopted each year? By whom? At what age?

How many children are in foster care or in institutions because of dependency and neglect?

How many professional workers serve children in child welfare programs?

How many children come before the courts each year because of delinquent behavior?

How many children are in training schools for delinquent youth?

How many children and mothers receive maternal and child health services? How many are immunized? What types of immunization do they receive?

How many children, with what kinds of disabilities, receive care under State crippled children's programs?

How many mothers and infants die?

How many babies die from causes associated with prematurity?

National, State, and local public and voluntary organizations look to the Children's Bureau for this information, which is useful in a variety of ways in the planning and execution of their programs.

This kind of factfinding has been carried out throughout the history of the Children's Bureau. Its earliest studies were concerned with infant and maternal mortality.

Since 1927, for example, it has been receiving information on numbers of children before the juvenile courts and now has cooperative relationships with more than half the courts of the country for this purpose. In addition, in the gathering of these statistics, the Bureau has cooperative relationships with State agen-

cies, the National Council of Juvenile Court Judges and the National Probation and Parole Association.

At any one time, the Bureau can study only selected aspects of the physical and social conditions under which the Nation's children live. Because it does not have a large research staff, it usually undertakes this kind of research in conjunction with other organizations, public and private.

For example, it currently has underway jointly with the Florida Department of Public Welfare and the Russell Sage Foundation a study to determine how well the adoptions of children worked out that were arranged without the help of social agencies.

With the cooperation of all State public welfare departments and the member agencies of the Child Welfare League of America and the Family Service Association, the Bureau is studying the reasons for the high turnover among professional social workers serving families and their children.

Plans are underway for studies of mentally retarded children and of children of working mothers.

The Bureau also calls attention to significant new developments in research areas which may affect the lives of children. For example, during the fall of 1957, the Bureau called a conference of specialists in pediatrics, obstetrics, dentistry, general practice, and public health, to discuss steps that can be taken to assure that, in the use of X-rays in care of mothers and children, the benefits to be expected outweigh the hazards of radiation insofar as medical wisdom can judge.

Through its clearinghouse on research relating to children, the Bureau provides information on research currently underway throughout the country. This clearinghouse is used by psychologists, educators, public health workers, social workers, psychiatrists and others to encourage multidisciplinary research and to point up the gaps in present research efforts.

Parents, professional workers, public and voluntary professional and lay groups seek the help of the Bureau for information or sources of information on various aspects of child growth and development.

Information for parents and others working with children

The Bureau reaches a wide public audience through its publications for parents. During the 1957 fiscal year, total sales of Children's Bureau publications by the Superintendent of Documents reached an all-time high of 2,143,408. More than 38 million copies of Infant Care, for example, have been distributed since the bulletin was first issued. A recent spot check of quantity sales by the Superintendent of Documents, Government Printing Office, showed that during an 8-week period health personnel, including doctors, ordered in quantities in excess of 100 some 170,000 copies of Children's Bureau bulletins and folders for parents.

The series of parent publications include information about the normal growth and development of children from infancy through adolescence.

In addition, the Bureau for the past several years has been developing a series of publications for parents who have children with handicapping conditions. This series now includes: The Child Who is Hard of Hearing; The Child With a Cleft Palate; The Child With Cerebral Palsy; The Child With Epilepsy; The Child With Rheumatic Fever. The most recent of these publications, The Child Who is Mentally Retarded, was issued early in 1957. Some 120,245 copies of this publication have been sold since its publication.

The Bureau also produces other written and visual materials for citizens, lay and professional groups, agencies and organizations which can be used in advancing the well-being of children.

EFFECT OF HOUSE ACTION

The House Appropriations Committee recommended and the House has allowed $2 million of the $2,013,000 requested, or the same as for 1958.

The House cut of $13,000 in the budget estimate eliminated 2 positions and related expenses in connection with the 1960 White House Conference on Children and Youth.

NEW POSITIONS REQUESTED

Mrs. OETTINGER. The Children's Bureau is requesting no new positions for 1959. The requested increase is solely for the purpose of carrying new 1958 positions and related expenses for the full year 1959.

The House allowed $2 million of the $2,013,000 requested, reducing the amount $13,000 below the estimate. This cut eliminated two positions and related expenses, which were new in 1958 for initiating planning for the 1960 White House Conference.

For 1959 we planned to use these two new positions for carrying part of the increased load in the Office of the Chief for funneling and maintaining the flow of work between the regular staff of the Bureau and the White House Conference activities.

I think that concludes my remarks.

Senator HILL. In other words, you would like to have the $13,000 restored?

Mrs. OETTINGER. We would find it useful. However, there is no formal appeal for this item.

Senator HILL. Just tell me how useful it would be and how much of a need there is for it.

ADDITIONAL WORK FOR WHITE HOUSE CONFERENCE

Mrs. OETTINGER. The Office of the Chief will be very much overburdened by the kinds of activities that always come about during the times of the traditional White House Conference. It means a great deal of extra work for the staff and all the divisions and if we had a person in the Office of the Chief whose primary responsibility it was to be a liaison between those needs that developed in the White House Conference group and those services that we could render in the Children's Bureau, I think our work would be much more smooth and effective during the 2 years we will be planning for the White House Conference.

Senator HILL. What is the date of the Conference?

Mrs. OETTINGER. March 1960.

Senator HILL. March 1960. So at the end of this next fiscal year you would be within about 9 months of the Conference?

Mrs. OETTINGER. At the end of the fiscal year; yes.

Senator HILL. At July 1, 1959, you will be about 9 months from the Conference.

Mrs. OETTINGER. Yes.

Senator HILL. Is there anything else you would like to add?

Mrs. OETTINGER. No; that is all on this.

CHILDREN'S BUREAU

GRANTS TO STATES FOR MATERNAL AND CHILD WELFARE

STATEMENTS OF MRS. KATHERINE B. OETTINGER, CHIEF, CHILDREN'S BUREAU, ACCOMPANIED BY JAMES F. KELLY, DEPARTMENTAL BUDGET OFFICER

APPROPRIATION ESTIMATE

"GRANTS TO STATES FOR MATERNAL AND CHILD WELFARE

"[Grants to States for maternal and child welfare:] For grants to States for maternal and child-health services, services for crippled children, and child-welfare services as authorized in title V, parts 1, 2, and 3, of the Social Security Act, as amended (42 U. S. C., ch. 7, subch. V), $41,500,000, of which $15,000,000 shall be available for services for crippled children, $16,500,000 for maternal and

child-health services, and $10,000,000 for child-welfare services: *Provided*, That any allotment to a State pursuant to section 502 (b) or 512 (b) of such Act shall not be included in computing for the purposes of subsections (a) and (b) of sections 504 and 514 of such Act an amount expended or estimated to be expended by the State: *Provided further*, That $1,000,000 of the amount available under section 502 (b) of such Act shall be used only for special projects for mentally retarded children."

Funds available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate	$41,500,000	$41,500,000	$42,500,000

Obligations by activity

Description	1958 appropriation	1959 budget estimate	House allowance
Grants to States for—			
Maternal and child health services	$16,500,000	$16,500,000	$16,500,000
Crippled children's services	15,000,000	15,000,000	15,000,000
Child welfare services	10,000,000	10,000,000	11,000,000
Total obligations	41,500,000	41,500,000	42,500,000

Obligations by objects

Object classification	1958 appropriation	1959 budget estimate	House allowance
11 Grants, subsidies and contributions	$41,500,000	$41,500,000	$42,500,000

Summary of changes

	Amount
Total 1958 actual appropriation	$41,500,000
1959 appropriation request	41,500,000
Net change requested	

	1959 budget estimate	1959 House allowance
Increase for program items:		
Child welfare services		+$1,000,000

EFFECT ON HOUSE ACTION

Activity 3. Child welfare services

The House provided $11 million for this program as compared with the $10 million requested. This would make available $11 million as compared with $12 million authorized by the Social Security Act.

This action will increase the amount to be allotted to each State by (1) increasing from $33,333 to $36,667 the amount of the flat grant, and (2) increasing the amount for each State in proportion to the number of rural children under 18.

The increase made by the House will (1) permit more training of public child welfare workers which will in turn result in provision of improved services to children, (2) make services available to children in more geographic areas, and (3) make services available to a greater number of children.

TABLE 1.—*Maternal and child-welfare provisions of Social Security Act as amended (title V, pts. 1, 2, and 3), distribution of amount authorized for appropriation for each program each fiscal year*

	Fund	Amount
Maternal and child health services (pt. 1):		
Uniform allotment of $60,000 to each State (sec. 502 (a))	A [1]	$3,180,000
Allotment on basis of live births (sec. 502 (a))	A [1]	5,070,000
Allotment according to financial need of each State for assistance in carrying out State plan after taking into consideration number of live births in each State (sec. 502 (b))	B	8,250,000
Total		16,500,000
Services for crippled children (pt. 2):		
Uniform allotment of $60,000 to each State (sec. 512 (a))	A [1]	3,180,000
Allotment according to need of each State after taking into consideration number of crippled children in each State in need of services and cost of furnishing such services (sec. 512 (a))	A [1]	4,320,000
Allotment according to financial need of each State for assistance in carrying out State plan after taking into consideration number of crippled children in each State in need of services and cost of furnishing such services (sec. 512 (b))	B	7,500,000
Total		15,000,000
Child welfare services (pt. 3): [2]		
Uniform allotment of $40,000 to each State (sec. 521 (a))		2,120,000
Allotment on basis of ratio of rural population of each State under the age of 18 to total rural population of United States under such age (sec. 521 (a))		9,880,000
Total		12,000,000

[1] Fund A must be matched by the States.
[2] Sec. 521 (a) was amended by Public Law 880, approved Aug. 1, 1956, by increasing the annual authorized appropriation from $10,000,000 to $12,000,000 effective "beginning with the fiscal year ending June 30, 1958."

TABLE 2.—*Grants to States for maternal and child welfare—Summary of tentative apportionments of amounts requested for fiscal year 1959*

	Fund	Amount
Maternal and child health services		$16,500,000
Sec. 502 (a)	[1] A	8,250,000
Sec. 502 (b)	B	8,250,000
Crippled children's services		15,000,000
Sec. 512 (a)	[1] A	7,500,000
Sec. 512 (b)	B	7,500,000
Child welfare services, sec. 521 (a)		10,000,000
Total 1959		41,500,000

[1] Fund A allotments are required to be matched by the States.

See tables 2a, 2b, 2c for tentative apportionments to States under each program.

TABLE 2A.—*Grants to States for maternal and child health services—Tentative apportionment of amount requested for fiscal year 1959*

State	Total	Fund A [1]	Fund B [2]
Alabama	$369,865	$159,955	$209,910
Alaska	98,975	68,975	30,000
Arizona	127,028	94,145	32,883
Arkansas	210,613	111,073	99,540
California	675,609	442,863	232,746
Colorado	138,892	108,892	30,000
Connecticut	154,115	124,115	30,000
Delaware	102,935	72,935	30,000
District of Columbia	115,563	85,563	30,000
Florida	285,711	169,146	116,565
Georgia	425,100	182,717	242,383
Hawaii	109,938	79,938	30,000
Idaho	110,753	80,753	30,000
Illinois	376,724	329,549	47,175
Indiana	316,058	192,702	123,356
Iowa	243,451	137,884	105,567
Kansas	185,593	124,647	60,946
Kentucky	344,972	150,285	194,687
Louisiana	332,706	165,261	167,445
Maine	117,392	87,392	30,000
Maryland	208,256	142,944	65,312
Massachusetts	224,716	194,716	30,000
Michigan	468,030	300,229	167,801
Minnesota	283,873	159,825	124,048
Mississippi	346,236	137,419	208,817
Missouri	289,335	174,848	114,487
Montana	111,349	81,349	30,000
Nebraska	131,856	101,856	30,000
Nevada	97,667	67,667	30,000
New Hampshire	105,250	75,250	30,000
New Jersey	238,356	208,356	30,000
New Mexico	121,472	91,472	30,000
New York	618,721	478,538	140,183
North Carolina	565,755	200,950	364,805
North Dakota	111,060	81,060	30,000
Ohio	535,939	333,030	202,909
Oklahoma	177,855	121,213	56,642
Oregon	147,127	107,390	39,737
Pennsylvania	642,070	356,588	285,482
Puerto Rico	361,311	155,091	206,220
Rhode Island	111,864	81,864	30,000
South Carolina	329,593	137,684	191,909
South Dakota	112,767	82,767	30,000
Tennessee	386,026	163,896	222,130
Texas	653,311	353,071	300,240
Utah	120,411	90,411	30,000
Vermont	101,417	71,417	30,000
Virgin Islands	91,115	61,115	30,000
Virginia	373,835	175,516	198,319
Washington	167,877	136,266	31,611
West Virginia	212,032	113,968	98,064
Wisconsin	298,506	172,925	125,581
Wyoming	100,519	70,519	30,000
Total distribution by formula under secs. 502 (a) and 502 (b)	13,687,500	8,250,000	5,437,500
Special projects for mentally retarded children [3]	1,000,000	----------	1,000,000
Reserve fund B	1,812,500	----------	1,812,500
Total	16,500,000	8,250,000	8,250,000

[1] Under sec. 502 (a) (fund A) each State receives a uniform grant of $60,000 and an additional grant in proportion to the number of live births in the State (1955).

[2] Under sec. 502 (b) (fund B) $1,000,000 is to be used only for special projects for mentally retarded children and $1,812,500 or 25 percent of the remaining $7,250,000 is reserved for other special projects. The remainder, $5,437,500, is apportioned so that each State receives an amount which varies directly with the number of urban and rural live births in the State (1955) and inversely with State per capita income (1954–56). No State receives less than $30,000. Live births in rural areas are given twice the weight of those in urban areas.

[3] See supplement to table 3a for 1958 estimate of payments to States for mental retardation projects.

TABLE 2b.—*Grants to States for services for crippled children—Tentative apportionment of amount requested for fiscal year 1959*

State	Total	Fund A [1]	Fund B [2]
Alabama	$397,904	$150,455	$247,449
Alaska	89,206	64,206	25,000
Arizona	116,108	91,108	25,000
Arkansas	246,686	109,199	137,487
California	452,351	377,627	74,724
Colorado	126,866	101,589	25,277
Connecticut	136,269	111,269	25,000
Delaware	95,280	70,280	25,000
District of Columbia	101,355	76,355	25,000
Florida	276,597	152,324	124,273
Georgia	439,507	166,076	273,431
Hawaii	100,754	75,754	25,000
Idaho	102,891	77,891	25,000
Illinois	353,048	282,365	70,683
Indiana	315,035	173,553	141,482
Iowa	249,133	129,493	119,640
Kansas	177,250	112,604	64,646
Kentucky	380,152	143,312	236,840
Louisiana	328,480	147,050	181,430
Maine	108,565	83,565	25,000
Maryland	165,567	130,695	34,872
Massachusetts	195,482	170,482	25,000
Michigan	408,399	258,333	150,066
Minnesota	280,186	144,914	135,272
Mississippi	346,150	125,421	220,729
Missouri	289,478	159,467	130,011
Montana	102,624	77,624	25,000
Nebraska	133,976	95,514	38,462
Nevada	91,409	66,409	25,000
New Hampshire	98,418	73,418	25,000
New Jersey	209,300	184,300	25,000
New Mexico	110,434	85,434	25,000
New York	441,633	414,276	27,357
North Carolina	580,639	186,303	394,336
North Dakota	103,224	78,224	25,000
Ohio	491,428	286,704	204,724
Oklahoma	213,066	117,210	95,856
Oregon	141,542	103,325	38,217
Pennsylvania	610,324	319,415	290,909
Puerto Rico	386,710	140,775	245,935
Rhode Island	103,825	78,825	25,000
South Carolina	339,437	131,496	207,941
South Dakota	103,825	78,825	25,000
Tennessee	395,485	152,858	242,627
Texas	714,615	302,993	411,622
Utah	110,234	85,234	25,000
Vermont	94,546	69,546	25,000
Virgin Islands	85,801	60,801	25,000
Virginia	368,569	158,265	210,304
Washington	173,830	126,690	47,140
West Virginia	254,492	114,874	139,618
Wisconsin	293,370	156,730	136,640
Wyoming	93,545	68,545	25,000
Total exclusive of reserve fund B	13,125,000	7,500,000	5,625,000
Reserve fund B	1,875,000		1,875,000
Total	15,000,000	7,500,000	7,500,000

[1] Each State receives a uniform grant of $60,000, and an additional grant in proportion to the number of children under 21 years in the State (1956).

[2] $1,875,000 of fund B or 25 percent is reserved for special projects. The remainder, $5,625,000, is apportioned so that each State receives an amount which varies directly with the number of children under 21 years in urban and rural areas in the State (1956) and varies inversely with State per capita income (1954–56). No State receives less than $25,000. Children in rural areas are given twice the weight of those in urban areas.

TABLE 2c.—*Grants to States for child welfare services—Tentative apportionment of amount requested for fiscal year 1959*

	Total [1]		Total [1]
Alabama	$287, 192	Nevada	$47, 154
Alaska	47, 572	New Hampshire	61, 161
Arizona	102, 478	New Jersey	115, 940
Arkansas	194, 785	New Mexico	96, 256
California	368, 691	New York	313, 906
Colorado	118, 187	North Carolina	444, 089
Connecticut	91, 176	North Dakota	96, 822
Delaware	52, 822	Ohio	394, 827
District of Columbia	33, 333	Oklahoma	174, 735
Florida	210, 659	Oregon	138, 417
Georgia	329, 192	Pennsylvania	436, 864
Hawaii	57, 067	Puerto Rico	270, 741
Idaho	83, 039	Rhode Island	48, 173
Illinois	300, 160	South Carolina	258, 165
Indiana	262, 690	South Dakota	93, 457
Iowa	213, 451	Tennessee	295, 139
Kansas	154, 620	Texas	488, 440
Kentucky	297, 598	Utah	78, 461
Louisiana	241, 173	Vermont	63, 121
Maine	89, 381	Virgin Islands	34, 822
Maryland	145, 535	Virginia	302, 174
Massachusetts	121, 700	Washington	159, 732
Michigan	335, 725	West Virginia	212, 072
Minnesota	234, 400	Wisconsin	243, 176
Mississippi	262, 251	Wyoming	54, 198
Missouri	234, 973		
Montana	82, 935	Total	10, 000, 000
Nebraska	125, 173		

[1] Each State receives a flat grant of $33,333 and an additional grant in proportion to the number of rural children under 18 in the State (1956).

TABLE 3.—*Grants to States for maternal and child health services—Estimated payments for special projects for mentally retarded children, 1958*

Alabama	$20, 000	Nevada	$60, 000
Alaska	32, 100	New Mexico	30, 000
Arizona	36, 826	New York	45, 600
Arkansas	30, 000	Ohio	20, 000
California	18, 000	Oklahoma	54, 911
Colorado	25, 000	Pennsylvania	50, 000
Connecticut	50, 000	Rhode Island	35, 000
District of Columbia	46, 700	South Carolina	30, 000
Florida	20, 000	Tennessee	46, 300
Georgia	20, 000	Texas	52, 000
Hawaii	45, 208	Virginia	40, 000
Idaho	30, 000	Washington	57, 500
Illinois	44, 500	Wisconsin	30, 000
Iowa	50, 700		
Maine	24, 032	Tentative estimate of payments to 31 States, 1958	[1] 1, 158, 877
Massachusetts	30, 000		
Michigan	34, 500		
Minnesota	50, 000		

[1] This total includes $1,000,000 earmarked in the Appropriation Act for special projects for mentally retarded children and $158,877 derived from other special project funds.

HOUSE ACTION

Senator HILL. Now, on this item there is an increase of $1 million over this year.

Mrs. OETTINGER. This was the House action and they permitted us an increase of $1 million.

Senator HILL. For the record, tell us this, and I am sure this is in your full statement, but for my information, what is the need for this $1 million?

Mrs. OETTINGER. The need centers around the need which arose from population increases, and we have, as you know, 9 million more children in the last 5 years. This means more work in the institutions, more foster care, more adoptions, which is very responsive, of course, to the birthrate, and naturally more children in need of the protective services. It also means we have an additional need because of rising costs in rearing the family with medical care, food, clothing, and all of those things that just naturally mean that children need more money to be maintained, particularly in this situation where there is an additional cost in our professional services, which of course have risen in the last 5 years, just as have all professional services.

COUNTIES WITHOUT COVERAGE

Then on coverage there are about 13 million children living in 1,500 counties that have no child welfare workers. It might be possible to increase this if the amount of funds were available to the States because these uncovered counties do constitute about 49 percent of the counties in our Nation and I think perhaps you would be sympathetic with the need, too, for additional training of our social workers, which is always a dilemma that a State faces, as they have limited funds. They cannot send too many people to school and at the present time only sbout 28 percent of the workers of the country are fully trained.

WORK ON ADOPTIONS

Lastly, there are special projects of a very heartening nature, for example, the finding of more ways to adopt children who are hard to place, such as older children and children who are in a crippled condition, and similarly there are more imaginative ways for placing these children in foster care rather than in institutions. Many States have different projects. I know you are familiar with many of them.

In the interest of time, I will not delineate them, but it is that type of thing that becomes possible as more funds are available. This amount that is now allowed us is $1 million below the authorization.

ALLOWANCE BELOW AUTHORIZATION

Senator HILL. Even with the $1 million that the House added, you would still be $1 million under the authorization?

Mrs. OETTINGER. That is correct.

Senator HILL. Well, if you received the full amount, $12 million which is an additional $1 million over and above what the House gave you, do you think you could use that to good advantage?

Mrs. OETTINGER. Well, you know that there are always many demands and many reasons that money can be spent for children and there are many sources, and I am sure that additional funds in the country, from whatever place they are able to be derived, would be of great help in meeting this enormous problem of our children.

Senator HILL. The problem is enormous, isn't it?

Mrs. OETTINGER. Indeed it is.

Senator HILL. The House of Representatives is today considering, in their appropriation bill, the bill for defense of some forty-odd-billion dollars. We are now only talking about $1 million more for children; is that not right?

Mrs. OETTINGER. In behalf of the children of the entire country.

Senator HILL. That is right, the entire country. That is right. These children are our most precious possession, and I know you agree on that.

Mrs. OETTINGER. And I think the hope of all our future rests on these youngsters.

Senator HILL. That is right, it rests on these children.

Is there anything else you would like to add?

Mrs. OETTINGER. Not on this item. Thank you.

(Mrs. Oettinger's prepared statement follows:)

STATEMENT BY CHIEF, CHILDREN'S BUREAU

The 1959 estimate continues the 1958 amounts for maternal and child health services ($16,500,000), crippled children's services ($15 million), and child welfare services ($10 million).

The amount requested for maternal and child health and crippled children's services is the maximum authorized for annual appropriation by title V of the Social Security Act. The amount requested for child welfare services is $2 million under the currently authorized $12 million.

State agencies responsible for providing health and welfare services to mothers and children must take into account in their planning the marked rise in the child population, in cost of services, and the gaps that exist in the programs.

There are several developments in the programs for which the Children's Bureau administers grants which we think have significance at this time.

MATERNAL AND CHILD HEALTH SERVICES

Grants are provided to enable States to extend and improve services for promoting the health of mothers and children, especially in rural areas and areas suffering from economic distress. The States must provide matching funds for one-half of the amount appropriated; the remainder is not matched and is distributed to the States on the basis of financial need of each State for assistance in carrying out its plans.

State plans for the use of maternal and child health funds are made by State health agencies. The services are largely provided by local health departments.

One of the most heartening developments in this program is the way the States have used the special funds earmarked by the Congress to stimulate and expand their own programs of service to mentally retarded children.

Twenty-seven States used grants from the Children's Bureau to put special projects into operation during 1957. These projects cover a wide gamut of approaches to the needs of the mentally retarded child; from how his family can be helped to keep him at home and live in the community to how the various professions can best approach his needs through additional training and through a variety of service programs. During 1958, three more State projects in this one area of service have been approved and another is in the process of approval. For these 31 special projects, all of the $1 million earmarked by the Congress and an additional $158,877 of special project maternal and child health funds have been allocated and budgeted, thereby taking up all available funds for special projects. In addition, based on 1957 experience, it is estimated that the States will expend approximately $500,000 of other Federal maternal and child health funds for mental retardation services in 1958.

Under the maternal and child health programs States have been able to improve services for families of migrant agricultural workers. In Arizona, for example, maternal and child health services have been expanded for migrants as well as the resident population. A number of States are trying to learn more about the total life pattern of migrants. For it is our common belief that only as the way of the migrant's life is recognized and understood can health and welfare personnel meet the needs of the migrant population of our country. In Florida, the State department of health has been studying the migrant population in that State, with particular reference to the use of health services. Colorado has recently

added a sociologist to their health department staff to study the response of migrants to available health services and to assist in working out interstate problems in helping migrants.

The main emphasis of the maternal and child health programs for which the Children's Bureau administers grants is on prevention. In this connection, some 1,085,000 children were served through medical well-child conferences during the calendar year 1956. Of this total, 445,000 were infants. A total of 430,000 mothers received maternity nursing service. And nursing service, primarily in infancy and the preschool children, reached 2,660,000 children.

Medical prenatal and postnatal clinic services were given to 224,000 mothers during this year.

In the immunization programs carried forth on this preventive front, 1,248,000 children were immunized against smallpox, 1,219,000 against diphtheria, more than a million against whooping cough and about the same number against tetanus.

State health departments are now providing polio immunization under the maternal and child health program.

Most of the States are working toward improving their school health services and dental programs. During the calendar year 1956, about 1,945,000 schoolchildren were examined by physicians. And the screening process was used to reach still larger numbers of children—3,580,000 who were screened for sight defects, 2,491,000 for hearing impairment.

CRIPPLED CHILDREN'S SERVICES

Grants are made to the States to extend and improve services for locating crippled children, and for providing medical, surgical, corrective, and other care and services for children who are crippled or who are suffering from conditions which lead to crippling. The States are required to provide matching funds for half of the amount appropriated; the remainder is not matched and is distributed to the States on the basis of financial need of each State for assistance in carrying out its plan.

State plans for crippled children's services are developed by the State crippled children's agency and services are provided by State and local agencies.

A development of significance during the fiscal year 1957 was the establishment of the first child amputee training course in the country. In Michigan, Federal crippled children's funds were used in the initiation of this project, through which physicians, occupational therapists, physical therapists, and medical social workers can receive training in the special skills they need to help the child amputee make the maximum use of his abilities. At the same time, the facilities at the Michigan center can be used by any child amputee in the country if services to help him are not available in his home community or State.

Crippled children's agencies in other States are using the Michigan experience to develop services for this group of children.

In California, for example, the Crippled Children's Service recently established a child amputee prosthetic project which is adding to our knowledge of the care of children with amputations and of the fitting of artificial hands.

The experience in the amputee program is one illustration of the bringing together of clinical and engineering science research findings to bring about better lives for handicapped children.

There are a number of statistics which help to give an overview of the programs of service in which the Children's Bureau is involved in its grants-in-aid program to the States.

More children received services under the crippled children's program in the calendar year 1956 than in any previous year. Of the 296,000 children who got the services of a physician during the year some 117,000 were new cases—children who had received no previous help from the crippled children's agencies.

Over 40 percent of the total expenditure for crippled children's services went for hospital and convalescent care. As I am sure you are aware, the average daily cost of hospital care continues to rise and is of concern to the administrators of these programs of service.

States have made significant progress in extending their programs for crippled children with such nonorthopedic handicaps as congenital heart disease, cleft palate, and children with speech and hearing impairments. Since the number of these children is many times greater than the number with orthopedic handicaps, we have made only a beginning when children with nonorthopedic handicaps represent less than half of those receiving physicians' services through State crippled children's programs.

State health departments continue some extension and improvement of speech and hearing programs.

Colorado is an example of a State which is making a particular effort at case-finding of preschool children. Its new hearing conservation project, started last spring, greatly emphasizes the development of preventive and treatment services in the rural parts of the State.

California has started a new project at the John Tracy Clinic which devotes particular attention to the problems of central nerve deafness of children. The training program of the Bill Wilkerson Speech and Hearing Center, affiliated with Vanderbilt University in Tennessee, is being extended with the help of Federal crippled children's funds.

Other States which have made specific advances in extending and improving their programs for these children include Arkansas, Texas, and New Mexico. In addition, Indiana, Wisconsin, and Ohio are making provision for training in audiology.

As you know, with some impetus from Federal crippled children's funds, a regional heart-center plan has now been in operation for a number of years in the Nation; and, as more knowledge is developed about surgical techniques, more kinds of congenital heart conditions can be corrected or ameliorated by the highly skilled surgeons at these centers.

During the past year, Virginia, Massachusetts, and Montana have initiated new special projects in the care of children with cleft palate.

CHILD WELFARE SERVICES

Federal grants are provided to enable the States to establish, extend, and strengthen, especially in rural areas and other areas of special need, child welfare services for the protection and care of homeless, dependent and neglected children and children in danger of becoming delinquent; and services for the return of runaway children to their own homes in other States. The States are required by law to meet part of the cost of child welfare services in rural areas.

The law provides that State plans for child welfare services be developed jointly by the State public welfare agency and the Children's Bureau. The State agency administers the plan and services are provided by the State and local agencies.

On March 31, 1957, about 330,000 children were reported as receiving child welfare services from public welfare agencies. Some 38 percent of these children were living with their own parents or relatives, 44 percent in foster family homes and 18 percent in institutions or elsewhere.

The primary objectives of the child welfare program are to preserve the child's own home and his place in it wherever possible, and, if the child must be cared for away from his own home, to provide substitute care for him with a relative, if possible, or in a foster family home, group home, or institution, according to his individual needs.

The services included in the child welfare program are essential in the prevention of juvenile delinquency. Through these services help can be given to children when the first signs of trouble appear. States are giving increasing attention to strengthening child welfare services as part of their community programs in coping with the increase in juvenile delinquency.

Interest in the development and strengthening of programs of services to children in their own homes, particularly protective services for children who are neglected or abused, has been increasing on national, State, and local levels. A number of States, such as Tennessee, Minnesota, Pennsylvania, Wisconsin, and Puerto Rico, have increased their State staffs to provide for special consultants on services to children in their own homes. Studies have been made in local communities to determine the need for protective services and how these services can be provided.

More States are developing homemaker service to enable children to remain in their own homes when the family cannot provide the care they need because of the mother's illness or hospitalization. A new use of this service is to help parents provide adequate care for children who might otherwise be neglected.

Resources for mentally retarded children vary considerably among the States, but there is a definite movement toward expansion of social services, enabling more children to remain in their own homes. Public welfare agencies in a number of States, such as Missouri and Washington, are conducting surveys to identify the retarded children in their case loads and to determine their special needs. Day-care centers for mentally retarded children have been established in Delaware and Massachusetts. In Oregon, Federal funds have been used to pay the cost

of foster home care for mentally retarded children who cannot remain in their own homes.

State agencies have taken varying approaches to providing special services to children of migratory agricultural workers. In Pennsylvania a full-time consultant on migrant children is helping local communities in providing better services for this group of children. In Potter County, Pa., a day-care center for preschool children of migrant laborers has been provided during the summer months. Additional child welfare workers are provided in Ohio and Florida to improve and expand the services for this group of children.

While a primary objective of child welfare services is to preserve the child's own home and his place in it wherever possible, child welfare services also are concerned with the best substitute care possible according to a child's individual needs when he cannot remain in his own home. States have, therefore, been concerned with more careful selection of foster care for these children, with relatives, in foster family homes, group homes, or institutions. Increasing recognition is being given to the desirability of a permanent home for every child. When he cannot be returned to his own home another permanent plan must be made—if possible, in an adoptive home. State agencies are emphasizing early adoptive placement, protection of the child, the natural and adoptive parents, and placement of handicapped and older children in adoption.

Many years of experience in child welfare programs has shown the wisdom of strengthening these services through the employment of professionally trained child welfare staff. The States use the major portion of the child welfare service funds to employ child welfare staff and, additionally, some funds for professional education and in-service training of staff. In the fiscal year 1956, 82 percent of Federal child welfare funds went for the employment of personnel, and 9 percent for professional education and in-service training.

On June 30, 1956, the coverage provided by a full-time public child welfare worker had been extended to the children in 1623 counties of the Nation's more than 3,000 counties. In 964 of these counties, the child-welfare workers were paid in whole or in part from Federal child welfare funds. Seventy-seven percent of such counties were rural.

Annual budgets for 1958 show that the majority of State agencies already have planned expenditures for the full amount of their allotment from the $10 million appropriated.

In conclusion, the ways in which the States have made use of grant funds available to them in all three categories administered by the Children's Bureau show the significant contribution of these grants in extending and improving services for children.

EFFECT OF HOUSE ACTION

The House Appropriations Committee recommended and the House has allowed $42,500,000 or $1 million more than the $41,500,000 requested and $1 million more than appropriated for 1958. The $1 million additional is for the program of child welfare services, but does not affect either maternal and child health services or crippled children's services which are at the authorized maximum. This action will raise the amount for child welfare services for each State and will bring the amount for this activity to within $1 million of the $12 million authorized by the Social Security Act.

CHILDREN'S BUREAU

SALARIES AND EXPENSES

WHITE HOUSE CONFERENCE ON CHILDREN AND YOUTH

STATEMENTS OF MRS. KATHERINE B. OETTINGER, CHIEF, CHILDREN'S BUREAU, ACCOMPANIED BY JAMES F. KELLY, DEPARTMENTAL BUDGET OFFICER

APPROPRIATION ESTIMATE

"SALARIES AND EXPENSES, WHITE HOUSE CONFERENCE ON CHILDREN AND YOUTH

"For necessary expenses of preparation for a 1960 White House Conference on Children and Youth, $150,000: Provided, That a conference director may be appointed by the Secretary, without regard to civil service laws and the Classification Act of 1949, as amended, at a salary not to exceed $15,000 per annum."

Funds available for obligation

	1958 appropriation		1959 budget estimate		House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
Appropriation or estimate			18	$150,000	18	$150,000

Obligations by activity

Description	1958 appropriation		1959 budget estimate		House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
Planning the Conference			18	$150,000	18	$150,000

Obligations by objects

	1958 appropriation	1959 budget estimate	House allowance
Total number of permanent positions		18	18
Average number of all employees		16	16
Number of employees at end of year		18	18
01 Personal services		$115,279	$115,279
02 Travel		25,131	25,131
04 Communication services		1,638	1,638
07 Other contractual services: Services performed by other agencies		279	279
08 Supplies and materials		810	810
09 Equipment		4,422	4,422
11 Grants, subsidies, and contributions: Contributions to retirement fund		1,301	1,301
15 Taxes and assessments		1,140	1,140
Total obligations		150,000	150,000

Summary of changes

	Positions	Amount
1958 appropriation		
1959 appropriation request	18	$150,000
Net change requested	+18	+150,000

	1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount
Increase for program items:				
Planning the conference	18	$150,000	18	$150,000

SUMMARY OF PLANS

Senator HILL. You may proceed with this item of salaries and expenses for the White House conference.

Mrs. OETTINGER. This is a new appropriation in 1959 of $150,000 for the White House conference. This provides for 18 positions and related expenses.

Would you like me to detail any of our plans for this?

Senator HILL. Yes; you might summarize that.

Mrs. OETTINGER. These positions include a conference director to be appointed without regard to civil service laws at a salary not to exceed $15,000 per year. Of these positions, 11 are professional and 7 clerical to provide supporting services. People in the professional positions will direct conference planning, review recent and on-going research about children, help States and local communities plan and carry out factfinding, encourage the participation of national organizations, facilitate the exchange of information about activities in local communities, and interpret research findings for conference use.

The proposed 1960 conference will be the sixth in a series of White House conferences on children and youth. In the closing years of each decade of the present century, as you know, a conference concerned with some aspect of the well-being of children has been called by the President of the United States.

FUNCTION OF BUREAU

The Children's Bureau is the focal point in the Federal Government for planning and organizing this 1960 conference. This conference is a peacetime instrument for mobilizing community and national efforts in strengthening the coming generation in every stage of their growth and development in becoming mature and responsible citizens.

Basically, the White House conferences on children and youth have always been a cooperative venture of Government, citizen groups, and private organizations concerned with the well-being of children and youth. The 1960 White House conference will follow this tradition.

USE OF PRIVATE FUNDS

The financing of the 1960 conference is expected to follow the general pattern of the one held in 1950, for which the major part of the cost was derived from private funds.

Senator HILL. From private funds?

Mrs. OETTINGER. That is correct.

Senator HILL. How much are those private funds going to amount to?

Mrs. OETTINGER. About $275,000. That is counting the services of the many important people who are loaned as personnel. It is contemplated that the only direct Federal contribution for this conference will come through the funds appropriated to the Children's Bureau.

Senator HILL. All right. Is there anything else you would like to add?

Mrs. OETTINGER. No; thank you very much.

(The prepared statement regarding this item follows:)

STATEMENT BY CHIEF, CHILDREN'S BUREAU

INCREASE REQUESTED

This is a new appropriation in 1959. The amount requested, $150,000, provides for 18 positions and related expenses. These positions include a conference director to be appointed without regard to civil service laws at a salary not to exceed $15,000 per year. Of these positions, 11 are professional and 7 clerical to provide supporting services. People in the professional positions will direct conference planning, review recent and on-going research about children, help States and local communities plan and carry out factfinding, encourage the participation of national organizations, facilitate the exchange of information about activities in local communities, and interpret research findings for conference use.

BACKGROUND

The proposed 1960 conference will be the sixth in a series of White House conferences on children and youth. In the closing years of each decade of the present century, a conference concerned with some aspect of the well-being of children has been called by the President of the United States. The first conference in 1909 led to the establishment of the Children's Bureau, charged with the responsibility of "investigating and reporting upon all matters pertaining to the welfare of children and child life among all classes of our people."

ORGANIZATION OF THE CONFERENCE

The Children's Bureau is the focal point in the Government for planning and organizing this 1960 conference. Other Government agencies will participate actively in the conference through the Interdepartmental Committee on Children and Youth, composed of 34 Government agencies whose programs are concerned in some way with children. The President's Council on Fitness of Youth will take part through this Interdepartmental Committee of which it is a member.

Conference activities will be coordinated with those in the States through the National Council of State Committees for Children and Youth and with those of the national voluntary agencies through the Council of National Organizations. Both councils have carried responsibility for the followup work of the midcentury White House conference and have advised in preparatory work for the 1960 conference. Basically, the White House conferences on children and youth have always been a cooperative venture of government, citizen groups, and private organizations concerned with the well-being of children and youth. The 1960 White House conference will follow this tradition.

The financing of the 1960 conference is expected to follow the general pattern of the one held in 1950, for which the major part of the cost was derived from private funds. It is contemplated that the only direct Federal contribution for this conference will be through these funds appropriated to the Children's Bureau.

BASIC OBJECTIVES

The basic objectives of the 1960 conference will be to gather and disseminate information about new research findings from every field concerned with children and youth, to explore present obstacles to the well-being of children, and to recommend action that will assure them a chance to develop to their fullest capacity. To this end, during 1959 the major focus will be on factfinding. This conference is a peacetime instrument for mobilizing community and national efforts in strengthening the coming generation in every stage of their growth and development in becoming mature and responsible citizens.

PLANNING THE CONFERENCE

As will be noted from the proposed appropriation language, it is planned to employ a conference director, to be appointed by the Secretary without regard to civil service laws. Such a provision is considered to be necessary to obtain for such a limited tenure a person of high enough caliber to insure the success of the conference. As you can well imagine the administrative aspects alone of planning such a conference which in 1950 was attended by 5,000 persons, including over 500 representatives from abroad present many difficult problems.

The Washington meeting of the 1960 White House conference will mark the end of a decade of nationwide review of what we have learned about children and how we can apply this knowledge for their benefit in our swiftly changing social scene. In order to review recent and on-going research, for 2 years preceding the 1960 conference, a series of research meetings is proposed. These meetings will deal with special areas and top scientists in the fields under study will be asked to contribute. A series of reports will be developed that will be useful for both early planning and background for the conference. To plan and carry out this activity factfinding staff will be needed.

Also during the two years before the conference, factfinding on the needs of children will be going on at the State and local levels. Even now States are requesting aid on how to set up such studies so that they will be meaningful and comparable with studies in other States. Staff will be needed to work with State and local groups, and to work with the field staff of the Children's Bureau and other Federal agencies who are advising State agencies on coordinating community planning in behalf of children.

Over 500 national agencies were associated with the 1950 conference through a Council of National Organizations. This council has continued as a coordinating mechanism and will provide the means for bringing these groups into active participation in the 1960 conference. Most of the States also have committees on children and youth, growing out of the last conference. These are united by a national coordinating group, the Council for State Committees on Children and Youth. Many additional individuals and groups, who have a contribution to make to the 1960 conference, ordinarily express their interest in the well-being of children outside the normal channels of Federal-State relationships. Drawing them into conference activities presents a difficult problem. This is particularly true of youth groups and organizations. Consultants on State, national, and youth organizations are needed to help these councils, unaffiliated groups and individuals, including youth, to take an active part in the conference—both in planning and in participating.

Since this conference will involve many people working in their own local communities, communication is of basic importance. Communities will want to know what is going on in other communities. Also, if the objectives of the conference are to be realized, research findings must be made understandable to the conference participants and to the country as a whole. Staff are needed to facilitate such communication and to put research findings into form for popular use.

Even with the 18 positions proposed for 1959 the Bureau will be hard-pressed to meet the many demands which will be made upon us, because of the intense interest in the conference.

The White House Conference staff will need to be continued in fiscal year 1960 in connection with the actual holding of the conference in March 1960 and in winding up affairs, publishing reports, and planning for the followup activities after the conference.

Office of the Commissioner

SALARIES AND EXPENSES

STATEMENTS OF MR. CHARLES I. SCHOTTLAND, COMMISSIONER OF SOCIAL SECURITY; MR. WILLIAM L. MITCHELL, DEPUTY COMMISSIONER OF SOCIAL SECURITY; MR. ROY L. WYNKOOP, ADMINISTRATIVE OFFICER, OFFICE OF THE COMMISSIONER; AND MR. JAMES F. KELLY, DEPARTMENTAL BUDGET OFFICER

APPROPRIATION ESTIMATE

"Salaries and Expenses, Office of the Commissioner

"[Salaries and expenses, Office of the Commissioner:] For expenses necessary for the Office of the Commissioner of Social Security, [$300,000] *$314,000*, together with not to exceed [$240,000] *$246,000*, to be transferred from the Federal old-age and survivors insurance trust fund."

Amounts available for obligation

	1958 appropriation		1959 budget estimate		House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
Appropriation or estimate	--------	$300,000	--------	$314,000	--------	$314,000
Reimbursements from non-Federal sources	--------	240,000	--------	246,000	--------	246,000
Total available for obligation	66	540,000	66	560,000	66	560,000
Unobligated balance, reserve for savings	--------	48,000	--------	----------	--------	----------
Obligations incurred	66	492,000	66	560,000	66	560,000

Obligations by activities

Description	1958 appropriation		1959 budget estimate		House allowance	
	Number of positions	Amount	Number of positions	Amount	Number of positions	Amount
1. Direction and coordination of the social security program	30	$251,400	30	$261,000	30	$261,000
2. Appraisal and development of the social security program	36	240,600	36	299,000	36	299,000
Total obligations	66	492,000	66	560,000	66	560,000

Obligations by object

Object	1958 appropriation	1959 budget estimate	House allowance
Total number of permanent positions	66	66	66
Average number of all positions	56	64	64
Number of positions at end of year	66	66	66
01 Personal services	$413,700	$481,400	$481,400
02 Travel	7,500	7,500	7,500
04 Communication services	9,900	10,400	10,400
06 Printing and reproduction	15,200	13,700	13,700
07 Other contractual services	7,700	8,400	8,400
08 Supplies and materials	5,800	6,300	6,300
09 Equipment	6,100	1,000	1,000
11 Grants, subsidies, and contributions	26,060	31,260	31,260
15 Taxes and assessments	40	40	40
Total obligations	492,000	560,000	560,000

Summary of changes

	Positions	Amount
1958 actual appropriation		$300,000
1958 reimbursement from Federal old-age and survivors insurance trust fund		240,000
Total appropriation	66	540,000
Deduct:		
Nonrecurring equipment		5,100
Nonrecurring printing		1,500
Reserve for savings		48,000
1959 base		485,400
1959 appropriation request		314,000
1959 reimbursement from Federal old-age and survivors insurance trust fund		246,000
Total 1959 request	66	560,000
Net change requested		+74,600

	1959 budget estimate	1959 House allowance
Increases for mandatory items:		
Retirement contributions annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions	919	919
Annualization costs for 18 additional positions authorized in 1958	73,681	73,681
Total change requested	74,600	74,600

HOUSE ALLOWANCE

Senator HILL. Mr. Schottland, are you going to tell us about the Office of the Commissioner?

Mr. SCHOTTLAND. I think my statement may be filed, Mr. Chairman, and since it is very simple and there is no appeal of any kind, I think we will just rest on the statement that I am submitting. There are no additional positions involved. The additional money is for annualization of new positions authorized this year, not for additional positions.

Senator HILL. No new positions at all for next year?

Mr. SCHOTTLAND. That is correct.

Senator HILL. And the House allowed you the budget estimate?

Mr. SCHOTTLAND. That is correct.

PREPARED STATEMENT

Senator HILL. All right, sir. Your full statement gives the details?
Mr. SCHOTTLAND. That is correct.
Senator HILL. Your full statement will be filed for the record.
(The statement referred to follows:)

STATEMENT BY COMMISSIONER OF SOCIAL SECURITY

The Commissioner of Social Security is responsible to the Secretary for directing, supervising, and coordinating the operations of the four program bureaus of the Social Security Administration: Bureau of Old-Age and Survivors Insurance, Bureau of Public Assistance, Children's Bureau, and the Bureau of Federal Credit Unions.

RESPONSIBILITIES

In general, the Commissioner's Office has four major areas of responsibility:

1. Overall supervision of the programs of the Social Security Administration and its bureaus. The functions of the bureaus encompass direct program administration such as the Bureau of Old-Age and Survivors Insurance and the Bureau of Federal Credit Unions, as well as grant-in-aid administration of the public assistance and maternal and child welfare programs with their inherent problems of Federal-State relations.
2. Overall planning with relation to the problem of economic security of the American people.
3. Broad planning in the various welfare areas.
4. Compiling, studying, and analyzing information in areas pertaining to social security so that current facts on items such as medical-care costs, public and private assistance, and problems of the aging can be related to our present programs and can be used to develop long-range planning for social security in the United States.

1959 BUDGET REQUEST

For 1958 Congress appropriated funds to increase the staff of the Office of the Commissioner from 48 positions to 66 positions. No increase in staff is requested for 1959. However, since the 18 new positions for which funds were appropriated in 1958 were authorized for only a portion of that fiscal year, we will require $68,000 additional to pay the salaries and related expenses of such positions for the full year, 1959.

The budget request for fiscal year 1959 is $560,000. Of this amount $314,000 is requested from general funds; the remainder, $246,000, to be derived from the Federal old-age and survivors insurance trust fund. The total request for 1959 is an increase of $20,000 over funds appropriated for 1958 and $68,000 above 1958 obligations.

1958 AND 1959 WORK EMPHASIS

The 1956 amendments to the Social Security Act created a substantial increase in the work of the Office of the Commissioner. The amendments make it necessary to review and change or modify many of the operations and functions of our programs. New areas of activities were introduced by the amendments such as the new emphasis which was placed on self-help and self-care.

In addition to the increased workload brought about by the social security amendments, interest in social security matters on the part of both the general public and by Congress continues at a very high level. One indication of this is the number of bills introduced in Congress directly relating to the social-security programs. In the 82d Congress 168 such bills were introduced; in the 84th Congress 488 were introduced. In the 1st session alone of the 85th Congress 358 bills were introduced. Many of these bills must be reviewed to determine their impact upon basic program objectives and existing legislation. On a smaller number we are asked by the Bureau of the Budget, congressional committees, or Members of Congress for comments. I believe the interest being shown in the social security field is healthy and is conducive to development. However, proper consideration of these bills is highly important and part of the additional staff newly authorized in 1958 will work in this area of activity.

Other additional positions authorized by Congress last year are being directed toward strengthening our work in such areas as family life, services for the family, and problems of the aging; and to increase our ability to compile material and make studies to more adequately develop the long-range planning that should be done. In addition, we are now in a better position to handle the many day-to-day policy and program decisions which arise in programs as dynamic as ours.

I will be pleased to answer any questions you may have on our budget estimate for 1959, but first I want to assure you that I appreciate the assistance this committee gave us last year through recognition of our need for funds to work toward accomplishing the job that should be done.

Office of the Secretary

SALARIES AND EXPENSES

STATEMENTS OF RUFUS E. MILES, JR., DIRECTOR OF ADMINISTRATION, ACCOMPANIED BY JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

"*Salaries and Expenses*"

"[Salaries and expenses, Office of the Secretary:] For expenses necessary for the Office of the Secretary, [$1,800,000] *$1,819,000*, together with not to exceed [$260,000] *$263,000* to be transferred from the Federal old-age and survivors insurance trust fund."

Amounts available for obligation

	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation	$1,800,000	$1,819,000	$1,809,000
Advance from Federal OASI trust fund	260,000	263,000	263,000
Less: Unobligated balance, reserve for savings	−8,900		
Total amount available for obligation	2,051,100	2,082,000	2,072,000

Obligations by activities

Description	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Executive direction and program coordination	75	$695,838	77	$711,656	75	$701,656
2. Publications and reports	13	116,900	13	117,080	13	117,080
3. Administrative and financial management	192	1,238,362	192	1,253,264	192	1,253,264
Total obligations	280	2,051,100	282	2,082,000	280	2,072,000

Obligations by activities—Continued

	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
ACTIVITY I. EXECUTIVE DIRECTION AND PROGRAM COORDINATION						
1. Office of Secretary and Under Secretary	19	$204,700	19	$205,075	19	$205,075
2. Office of Internal Security	12	93,000	12	93,200	12	93,200
3. Office of Assistant Secretary	11	109,136	13	119,336	11	109,336
4. Office of Assistant Secretary (Legislation)	10	90,364	10	90,564	10	90,564
5. Office of Assistant to the Secretary (for Program Analysis)	23	198,638	23	203,481	23	203,481
Total, activity I	75	695,838	77	711,656	75	701,656
ACTIVITY II. PUBLICATIONS AND REPORTS						
Total, activity II	13	116,900	13	117,080	13	117,080
ACTIVITY III. ADMINISTRATIVE AND FINANCIAL MANAGEMENT						
1. Office of Director of Administration	4	37,285	4	41,285	4	41,285
2. Office of Financial Management	43	307,600	43	308,180	43	308,180
3. Office of Management Policy	18	143,100	18	143,380	18	143,380
4. Division of Personnel Management	28	205,440	28	208,745	28	208,745
5. Division of General Services	99	544,937	99	551,674	99	551,674
Total, activity III	192	1,238,362	192	1,253,264	192	1,253,264
Total obligations, all activities	280	2,051,100	282	2,082,000	280	2,072,000

Obligations by objects

Object classification	1958 appropriation	1959 budget estimate	1959 House allowance
Total number of permanent positions	280	282	280
Full time equivalent of all other positions	2	2	2
Average number of all employees	267	271	270
Number of employees at end of year	274	276	274
01 Personal services	$1,726,617	$1,750,616	$1,744,776
02 Travel	31,985	33,485	31,985
03 Transportation of things	420	420	420
04 Communication services	41,090	41,450	41,450
05 Rents and utility services	100	100	100
06 Printing and reproduction	48,638	49,238	48,638
07 Other contractual services	41,450	42,350	41,450
08 Supplies and materials	29,060	29,310	29,210
09 Equipment	25,700	23,700	23,000
11 Grants, subsidies, and contributions: Contributions to the retirement fund	104,145	109,436	109,076
13 Refunds, awards, and indemnities	1,145	1,145	1,145
15 Taxes and assessments	750	750	750
Total obligations	2,051,100	2,082,000	2,072,000

Summary of changes

	Positions	Amount
1958 actual:		
Appropriation	280	$1,800,000
Transfer from OASI		260,000
Total		2,060,000
Deduct: Nonrecurring equipment costs		2,700
Unobligated balance, reserve for savings		8,900
Total		−11,600
1959 base	280	2,048,400
1959 request:		
Appropriation	282	1,819,000
Transfer from OASI		263,000
Total		2,082,000
Net changes requested	+2	+33,600

	1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount
Increases:				
For mandatory items:				
Retirement contributions annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)		$3,755		$3,755
Annualization costs for 10 additional positions authorized in 1958		19,845		19,845
Subtotal		23,600		23,600
For program items:				
2 clerical positions to work on civil defense activities resulting from functions delegated to this Department from the Federal Civil Defense Administration	2	10,000		
Total change requested	2	33,600		23,600

EFFECT OF HOUSE ACTION

Activity I. Executive direction and program coordination

The House allowed an increase of $6,418 to cover the mandatory items and disallowed a requested increase of $10,000 for civil defense.

This reduction will not allow for the addition of two clerical positions needed to work on civil-defense activities resulting from functions delegated to this Department from the Federal Civil Defense Administration consisting mainly of correspondence and reporting relating to the operating agencies' FCDA program activities.

Activity II. Publications and reports

The House allowed the entire increase requested of $180 for mandatory items.

Activity III. Administrative and financial management

The House allowed the entire increase requested of $17,002 for mandatory items.

PREPARED STATEMENT

Senator HILL. Mr. Miles, we are very glad to have you here.

You may proceed in any way you see fit and you may file your statement in full, if you wish.

Mr. MILES. Mr. Chairman, Acting Secretary Richardson was called to the White House and asked me to insert this very brief statement in the record with respect to the Office of the Secretary salaries and expenses appropriation.

Senator HILL. All right. We will be glad to have that inserted at this point.

(The statement referred to follows:)

STATEMENT BY DIRECTOR OF ADMINISTRATION

Mr. Chairman and members of the committee, the Secretary has given you a review of the budget and legislative program for the entire Department for 1959. The various programs of the Department of Health, Education, and Welfare affect all of the people of the Nation, the status of their health, the state of their educational institutions and programs, their economic security, and many other aspects of their welfare. We come now to consideration of the appropriation for the Office of the Secretary. Certainly this is a less glamorous subject. However, viewed in perspective, the staff supported by this appropriation is an important and integral part of carrying out the basic departmental programs and each in his own way contributes to the program accomplishments as do the physician, the educator, and the social worker.

In order to carry out his responsibilities, the Secretary must be assisted by good staff work, and in order for the Department to operate effectively, it must be supported by appropriate administrative services.

Since the creation of this Department, the Secretary, supported by his staff, has given increasing leadership to the programs and functions within its jurisdiction. Attention has been given to the functions which cross organizational lines such as mental retardation, juvenile delinquency, aging, and migratory labor. Emphasis has been given to identifying the problems of education, the Federal role and the means of fulfilling this role.

The budget and legislative programs have been joint efforts of the operating agencies and the Secretary, and have consequently reflected a coordinated departmental point of view. Relationships within the executive branch and with the Congress have increasingly been handled by or through the Office of the Secretary. This is as it should be. We have become a rather closely knit organization, working together and assisting each other toward the end of more effective discharge of our responsibilities.

BUDGET REQUEST FOR 1959

The budget request for the Office of the Secretary is $2,082,000, an increase of $22,000 over the current year. The estimate includes $10,000 for civil defense activities, which we are no longer requesting be included in this appropriation. It is our understanding that the Administrator of Civil Defense will request the Independent Offices Subcommittee to include funds in the Federal civil defense appropriation for allocation to the agencies to whom certain civil defense functions have been delegated. The balance of the increase, $12,000, provides the full-year cost for the 1958 authorized level. With these funds and staff, we fully expect to continue our progress in evaluating programs and program needs, promoting economy and effectiveness of operations and serving the needs of the Department, the executive branch and the Congress.

Special staff on aging

There is one area of the Office of the Secretary which differs in many respects from our other functions and that is the special staff on aging. This staff is responsible for coordinating the Department's activities in the field of aging, giving leadership to this growing aspect of our society, and performing staff assistance for the Federal Council on Aging.

During this past year we have made tangible progress in this program. Our activities and accomplishments have been incorporated in a report entitled, "Programs of the Department of Health, Education, and Welfare Affecting Older Persons," which has been made available to the committee. A similar report entitled, "Aiding Older People," in which this Department participated with the Federal Council on Aging, has also been developed and furnished to the committee.

The special staff on aging has been very helpful in coordinating programs for older persons both within the Department and other departments and agencies. This activity will be continued as will our efforts to encourage the States and public and nonprofit organizations to initiate enlarged and strengthened services to these older persons.

Progress in personnel management

During the past several years the Office of the Secretary has been strengthened in the fields of program analysis, special staff on aging, financial management, management analysis and personnel management. With the increased staffs, considerable progress has been made. The activities and accomplishments in these areas are spelled out in the budget justification material which we have presented to you. I would like, however, to direct your attention to an innovation in administrative management which has been made possible with this increased staff. In the personnel field, we have initiated a program during this past year looking toward selection of individuals from among our younger employees and from new college graduates of persons with especially high promise for development, and have developed a planned program for their utilization which will permit them to advance as rapidly as they fulfill their promise.

Another area of personnel management about which we are quite hopeful is a plan which is getting under way which will make a special effort to arrange work schedules of older persons so as to provide a tapering off instead of an abrupt retirement where such an arrangement is mutually advantageous to the Government and to the individual. As both of these programs develop, we will report our progress and accomplishments to the committee.

EFFECT OF HOUSE ACTION

The House of Representatives allowed for the Office of the Secretary a total of $2,072,000, a reduction of $10,000 from the estimate. The allowance provides for the existing authorized staff and disallows the requested increase of $10,000 and 2 positions related to the civil defense program. For reasons stated above, no request is made for restoration of these funds.

CONCLUSION

I have not attempted to put into detail the functions and progress of each of the organizations in the Office of the Secretary. I am accompanied by several of the key people in the Office of the Secretary who will endeavor to answer any questions which you may have.

NO APPEAL FROM HOUSE ACTION

Mr. MILES. I would just like to point out, Senator, the amount we requested here is $2,072,000, which is the same figure as was allowed by the House. It is $10,000 less than the budget estimate, but the two positions at $10,000, which were contained in the budget estimate for civil defense, have been withdrawn and we are not appealing that amount. So the amount actually is the same as the House allowance and the number of positions is the same number as in the current year, 1958.

Senator HILL. There is no increase?

Mr. MILES. There is no increase; no, sir.

We admit to having a constantly growing workload, but have undertaken to commit ourselves to do it next year for the same amount.

Senator HILL. In spite of the increased work that you have, you are keeping your personnel at the same level that you had?

Mr. MILES. Yes, sir.

Senator HILL. Is there anything else you would like to add?

Mr. MILES. No; that is all, sir; thank you.

Senator HILL. Thank you very much.

Office of the Secretary

SALARIES AND EXPENSES

Office of Field Administration

STATEMENTS OF LEONARD W. A'HEARN, ACTING DIRECTOR, OFFICE OF FIELD ADMINISTRATION AND JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

"*Salaries and Expenses, Office of Field Administration*

"[Salaries and expenses, Office of Field Administration:] For expenses necessary for the Office of Field Administration, [$2,300,000] *$2,418,000,* together with not to exceed [$700,000] *$702,000* to be transferred from the Federal old-age and survivors insurance trust fund."

Funds available for obligation

	1958 appropriation	1959 budget estimate	House allowance
Appropriation or estimate	$2,300,000	$2,418,000	$2,358,000
Advances and reimbursements:			
Federal Old-Age and Survivors Insurance	700,000	702,000	702,000
Department of Labor working fund	47,700	47,700	47,700
Less: Unobligated balance, reserve for saving	−23,700		
Total available for obligation	3,024,000	3,167,700	3,107,700

Obligations by activity

Activity	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
Field administration	289	$1,645,000	298	$1,718,000	289	$1,658,000
Division of Grant-in-aid Audits	150	1,135,275	152	1,198,000	152	1,198,000
Division of State Merit Systems	32	243,725	32	251,700	32	251,700
Total obligations	471	3,024,000	482	3,167,700	473	3,107,700
Less: Working fund from Department of Labor for State merit system services	6	47,700	6	47,700	6	47,700
Adjusted obligations	465	2,976,300	476	3,120,000	467	3,060,000

Obligations by objects

Object classification	1958 appropriation	1959 budget estimate	1959 House allowance
SUMMARY OF PERSONAL SERVICES			
Total number of permanent positions	471	482	473
Full-time equivalent of all other positions	2		
Average number of all employees	449	465	458
Number of employees at end of year	452	466	457
01 Personal services	$2,438,340	$2,565,095	$2,515,605
02 Travel	183,190	189,590	184,590
03 Transportation of things	5,925	5,925	5,925
04 Communication services	109,800	116,925	114,910
05 Rents and utilities	2,500		
06 Printing and reproduction	10,500	10,755	10,500
07 Other contractual services	39,410	39,605	39,435
08 Supplies and materials	59,810	68,050	67,600
09 Equipment	23,840	6,540	6,540
11 Grants, subsidies, and contributions: Contribution to retirement fund	148,450	163,025	160,680
13 Refunds, awards, and indemnities	1,000	1,000	1,000
15 Taxes and assessments	1,235	1,190	915
Total obligations	3,024,000	3,167,700	3,107,700
Less: Working fund from the Department of Labor for State merit system services	47,700	47,700	47,700
Adjusted obligations	2,976,300	3,120,000	3,060,000

Summary of changes

	Positions	Amount	Positions	Amount
1958 actual appropriation	465	$2,300,000		
1958 OASI transfer		700,000		
1958 working fund (Department of Labor)	6	47,700		
Total appropriation			471	$3,047,700
Deduct nonrecurring costs:				
Equipment		17,800		
Rents		2,500		
Miscellaneous		1,320		−21,620
Unobligated balance, reserve for saving				−23,700
1959 base			471	3,002,380
1959 appropriation request:				
Appropriation	476	2,418,000		
OASI transfer		702,000		
Working fund (Department of Labor)	6	47,700	482	3,167,700
Net change requested			+11	+165,320

Summary of changes—Continued

	1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount
Increases:				
For mandatory items:				
Retirement contributions annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)		$7,075		$7,075
Annualization costs for 38 additional positions authorized in 1958		42,780		42,780
Communications and supply charges to be incurred for positions authorized operating agencies in regional offices in 1958		12,900		12,900
Subtotal		62,755		62,755
For program items:				
Direction and coordination of regional civil-defense planning	9	60,000		
Grant-in-aid auditors to process the workload anticipated due to new programs authorized in 1958	2	12,205	2	12,205
Annualization cost on existing positions (other than new positions authorized in 1958), necessary to reduce excessively high lapse rate caused by absorption of increased communications cost by GSA in 1958		5,220		5,220
Reclassification of 37 auditors in charge of States		25,140		25,140
Total change	11	165,320	2	105,320

New positions requested

	Grade	Annual salary
Division of Grant-in-Aids: Auditors (2)	GS-9	$10,880

EFFECT OF HOUSE ACTION

Activity I—Field administration

The House allowed an increase of $34,620 for mandatory items, annualization of existing positions due to excessively high lapse resulting from increased cost for communications by GSA and new equipment for 2 new grant-in-aid auditors being requested by the Division of Grant-in-Aid Audits.

It disallowed $60,000 for 8 civil defense officers and 1 communications clerk requested for the purpose of coordinating and planning regional functions delegated by FCDA.

Activity II. Division of grant-in-aid audits

An increase of $62,725 allowed by the House provides for mandatory costs, 2 new grant-in-aid auditors, and reclassification of 37 auditors in charge of States.

Activity III. Division of State merit systems

$7,975 increase allowed by the House represents mandatory costs.

NO APPEAL FROM HOUSE ACTION

Senator HILL. Mr. A'Hearn, we are glad to have you with us.

You may proceed to make your statement in any manner you see fit.

Mr. A'HEARN. Mr. Chairman, we filed a complete statement, and we are not appealing from the House action. What we are asking for here is, primarily, an annualization of new positions authorized last year. The other major item is the $25,000 we are asking for reclassification of auditors which has been approved by the Commission. We did not have the funds to pay for it.

Senator HILL. Did the budget allow you that $25,000?

Mr. A'HEARN. Yes.

Senator HILL. The House approved it, too?

Mr. A'HEARN. Yes, sir.

Senator HILL. And outside of that there is no increase?

Mr. A'HEARN. There are just a few incidental items, such as with the new staff added in 1958 to the regional offices by the operating agencies of the Department. We pick up the supply cost the second year.

Senator HILL. I see. But that new staff really was provided last year.

Mr. A'HEARN. Yes.

Senator HILL. In other words, all you are doing now is carrying out the program which we agreed on here last year?

Mr. A'HEARN. Yes; with one exception. We have requested two new auditors. That is primarily because of the workload in connection with the new medical-care program of the Bureau of Public Assistance.

Senator HILL. Those two auditors are simply to check the accounts and the disbursements in connection with the medical-care program of the social security?

Mr. A'HEARN. Yes, sir.

Senator HILL. Those are two additional ones?

Mr. A'HEARN. Yes, sir; that is all.

Senator HILL. Well, I would say they were pretty well contemplated when we agreed to the amendments, isn't that right, Mr. Kelly?

Mr. KELLY. Yes, sir.

Senator HILL. Is there anything you would like to add, sir?

Mr. A'HEARN. No, sir.

PREPARED STATEMENT

Senator HILL. Thank you very much, Mr. A'Hearn. We will insert your full statement in the record at this point.

(The statement referred to follows:)

STATEMENT BY ACTING DIRECTOR, OFFICE OF FIELD ADMINISTRATION

This opportunity to present the 1959 budget requirements for the Office of Field Administration is appreciated. I should like to highlight and summarize the budget requirements and direct your attention to the problems with which we are faced.

SUMMARY OF ESTIMATE

This budget for 1959 totals $3,120,000 and 476 positions representing a total increase of $120,000 and 11 positions, respectively, over 1958. Included in this total is an appropriation of $2,418,000, an increase over the comparable 1958 amount of $118,000, and an authorization to transfer OASI trust funds amounting to $702,000, an increase of $2,000. The increase is primarily for annualization of new positions authorized in 1958, reclassification of auditors in charge of States and for two new grant-in-aid auditors resulting from increased workload. The estimate also includes $60,000 for civil defense activities, which we are no longer requesting be included in this appropriation. It is our understanding that the Administrator of Civil Defense will request the Independent Offices Subcommittee to include funds in the Federal civil defense appropriation for allocation to the agencies to whom certain civil defense functions have been delegated.

RESPONSIBILITIES

This appropriation finances all of the activities of the Office of Field Administration except the handling of surplus property. These responsibilities include the operation of nine regional offices, including the cost of the regional directors and their immediate staffs and the provision of common business management services to operating agency staff located in or administered through the regional offices. These business management services consist of payrolling, voucher examination, accounting, personnel services, and office services such as purchasing, mail, messenger, mimeograph, supply, and like activities. Also financed from this appropriation are the departmentwide grant-in-aid audit and merit-system programs.

CURRENT PROBLEMS

The regions are responsible for sustaining the steadily growing workloads resulting from the expansion of established Department programs and the development of new programs and activities. The grant-in-aid audit function continues to have problems in coping with the increase in workload resulting from new and expanded programs. The State merit system services must also handle increased workloads.

FIELD ADMINISTRATION

This activity covers the overall function of the Director's office of providing leadership and guidance in the maintenance of effective field operations, insuring uniform application of Department policy in the field and promoting organizational and operating efficiency among the Department's field programs. It also includes the leadership, supervisory and coordinating responsibilities of the regional directors in the field including integrated administrative and staff services to field establishments.

DIVISION OF GRANT-IN-AID AUDITS

The Division has the responsibility for auditing grants made to State agencies for 31 of the grant-in-aid programs administered by the Department through the Public Health Service, the Social Security Administration, the Office of Vocational Rehabilitation, the Office of Education, and to review State activities in the utilization of Federal surplus property administered through the Division of Surplus Property. It is also the function of this Division to work with the several program bureaus and offices in the development and interpretation of fiscal requirements and standards governing the use of grant-in-aid funds. Audits will be made this year of State expenditures of approximately $4 billion, more than one-half of which is from Federal funds.

INCREASES

An increase of two positions is requested to assist in meeting the increased workload resulting from legislation affecting construction projects of health research facilities under Public Law 835, medical care bills for public assistance grantees under Public Law 880, and social services to public assistance grantees under Public Law 880. The full impact of the audit workload will be felt in 1959.

In addition funds are requested to reclassify auditors in charge of States from GS–11 to GS–12. These auditors are responsible for the basic work and details of the grant-in-aid audits in each State, planning audit work and scheduling audits in the most economical and efficient order possible. These audits cover 31 programs with varying laws and program regulations. The types and complexities of the programs increase year by year. Therefore, this request is made to establish a grade commensurate with the responsibilities of the positions.

DIVISION OF STATE MERIT SYSTEMS

The Division administers the personnel and merit system provisions of the grant-in-aid programs for the Bureau of Public Assistance, the Children's Bureau, the Public Health Service, and the Office of Vocational Rehabilitation. This function is also performed for the Bureau of Employment Security of the Department of Labor and funds are allocated from the Department of Labor for this purpose. The Division reviews the provisions of State plans and provides consultative service and technical materials to the States for the more efficient administration of their personnel systems. It also conducts field reviews of the personnel

operations of 290 State agencies administering the programs in the States and 70 State merit systems. No increase in positions is requested for this activity.

EFFECT OF HOUSE ACTION

The House of Representatives allowed for the Office of Field Administration a total of $3,060,000, a reduction of $60,000 from the estimate. The allowance provides primarily for mandatory items, two new grant-in-aid auditors to process the workload anticipated in new programs authorized in 1958 and reclassification of 37 auditors in charge of States from GS–11 to GS–12. It disallowed $60,000 for 8 civil defense officers and 1 communications clerk requested for the purpose of coordinating and planning functions delegated by FCDA.

Office of the Secretary

SALARIES AND EXPENSES

Office of the General Counsel

STATEMENTS OF PARKE M. BANTA, GENERAL COUNSEL, AND JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

"Salaries and Expenses, Office of the General Counsel

"[Salaries and expenses, Office of the General Counsel:] For expenses necessary for the Office of the General Counsel, [$500,000] *$505,000*, together with not to exceed $25,000 to be transferred from the appropriation "Salaries and expenses, certification and inspection services", and not to exceed [$449,000] *$450,000* to be transferred from the Federal old-age and survivors insurance trust fund."

Amounts available for obligation

Source of funds	1958 appropriation	1959 budget estimate	1959 House allowance
Appropriation	$500,000	$505,000	$505,000
Transfer from:			
Federal old-age and survivors insurance trust fund	449,000	450,000	450,000
Certification and inspection services, Food and Drug Administration	25,000	25,000	25,000
Less: Unobligated balance, reserve for savings	−18,800		
Total available for obligation	955,200	980,000	980,000

Obligations by activities

Description	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
1. Supervisory and general legal services	25	$212,232	25	$216,006	25	$216,006
2. Departmental program services:						
(A) Public Health	11	80,144	11	80,335	11	80,335
(B) Food and Drug	29	180,040	29	196,290	29	196,290
(C) OASI	25	140,513	25	141,513	25	141,513
(D) Welfare and Education	13	90,218	13	93,624	13	93,624
3. Regional and field	33	252,053	33	252,232	33	252,232
Total obligations	136	955,200	136	980,000	136	980,000

Obligations by objects

Object classification	1958 appropriation	1959 budget estimate	1959 House allowance
Total number of permanent positions	136	136	136
Average number of all employees	126	130	130
Number of employees at end of year	133	133	133
01 Personal services	$866,700	$888,200	$888,200
02 Travel	9,000	9,000	9,000
03 Transportation of things	50	50	50
04 Communication services	5,000	5,000	5,000
06 Printing and reproduction	1,400	1,400	1,400
07 Other contractual services	6,000	6,000	6,000
08 Supplies and materials	6,000	6,000	6,000
09 Equipment	9,300	9,300	9,300
11 Grants, subsidies and contributions; contributions to the retirement fund	51,000	54,300	54,300
15 Taxes and assessments	750	750	750
Total obligations	955,200	980,000	980,000

Summary of changes

	Position	Amount
1958 actual:		
Appropriation	136	$500,000
Transfer from OASI		449,000
Transfer from Food and Drug		25,000
Total	136	974,000
Deduct: Unobligated balance, reserve for savings 1959 base		−18,800
Total		955,200
1959 request:		
Appropriation	136	505,000
Transfer from OASI		450,000
Transfer from Food and Drug		25,000
Total	136	980,000
Net change requested		+24,800

	1959 budget estimate	1959 House allowance
Increases for mandatory items:		
Retirement contributions annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)	$1,903	$1,903
Annualization costs for 13 additional positions authorized in 1958	22,897	22,897
Total change requested	24,800	24,800

HOUSE ACTION

Senator HILL. Mr. Banta, Office of the General Counsel, we are glad to see you again.

Mr. BANTA. Thank you, Senator.

Senator HILL. You may present your statement in any way you see fit.

Mr. BANTA. I have a statement here, Senator, which I would like to file and which I think sufficiently covers the presentation of the request for the Office of the General Counsel; and the amount which we suggest to be appropriated is the amount provided for or asked for in the House and which the House did allow.

Senator HILL. In other words, the budget estimate as approved by the House of Representatives?

Mr. BANTA. That is right.

Senator HILL. Is there any increase over last year?

Mr. BANTA. There is a very slight increase.

Senator HILL. How much is that?

Mr. BANTA. Actually, it is $6,000.

Senator HILL. What is it for, sir? You certainly could not hire a lawyer for $6,000, could you?

Mr. BANTA. It is not to be used to hire another lawyer, but the budget process is such, Senator, that maybe I should refer to the budget expert to tell you exactly what that $6,000 is for.

Senator HILL. All right. Mr. Kelly.

Mr. KELLY. Mr. Chairman, the budget request is for the same staff as authorized this year, but the staff came on a little late in the year and this is the full year cost of the staff for this year.

Senator HILL. In other words, last year the staff was not paid for the full 12 months, whereas this year those 13 positions that we provided for last year were not actually employed for the full 12 months of the fiscal year and this year they will be on for the full 12 months and that makes the difference.

PREPARED STATEMENT

Thank your very much. We are certainly very much obliged to you. Your statement will be inserted in the record at this point.

(The statement referred to follows:)

STATEMENT BY GENERAL COUNSEL

The Office of the General Counsel performs all of the legal work incident to the activities of the Department. The workload of the office grows out of (1) the needs for legal assistance by the Secretary; the Surgeon General of the Public Health Service; the Commissioners of Social Security, Education, and Food and Drugs; the Director of the Office of Vocational Rehabilitation; and their staffs; (2) work on legislation involving preparation of reports to Congress and legislative drafting; and (3) litigation arising from program activities.

The 1959 budget estimate requests a total of $980,000 represented by a direct appropriation of $505,000 plus $450,000 to be transferred from the OASI trust fund and $25,000 from fees collected from food and drug certification services. This is an increase of $6,000 over funds appropriated in 1958 and covers annualization costs of new positions authorized in 1958 and annualization of retirement costs. No increase in staff is requested for 1959.

Over the past few years new legislation, along with the expanded activities of the Food and Drug Administration, has affected the workload of the Office of the General Counsel. The present staff provides a minimum acceptable standard of legal services.

SUPERVISORY AND GENERAL LEGAL SERVICES

Overall professional supervision and coordination of the work for the entire Office of the General Counsel, including office management functions are handled in the immediate office of the General Counsel. This office provides legal advice on purely departmental matters, delegations of authority, orders, manuals, etc.; also legal advice regarding procurement and property management and surplus property disposal. In this office also is the Department's tort claims officer. In addition, the immediate office of the General Counsel assumes responsibility for liaison with the Department of Justice, the legal offices of other departments and agencies regarding legal problems of mutual concern, and such legal matters as do not logically fall within the scope of the other divisions of the Office of the General Counsel. The workload remains rather constant from year to year.

In the Legislation Division the workload continues unabated. In fact, requests for reports on bills in the 85th Congress, 1st session, totaled 666 as compared with 1,105 requests during both sessions of the preceding Congress. At the beginning of the second session of the current Congress, the division had completed work on

373 and had 76 reports awaiting action, 217 of these requests were in various stages of development elsewhere in the Department.

PUBLIC HEALTH SERVICE

The variety and complexity of the functions of the Public Health Service continue to call for legal services of corresponding variety and scope. In addition to the legal services required routinely in the day-to-day administration of the Public Health Service Act, the newer programs continue to pose special legal problems for the staff of this division. Some of these programs are the water pollution control program; grants for construction of medical research facilities; the Alaska mental health program; the Indian health program; the special cancer chemotherapy program; national survey of sickness and disability; National Library of Medicine; grants for professional nurses and public health training; and the functions of the Public Health Service in connection with the medical care for members and dependents of members of the uniformed services. Moreover, in programs of earlier origin such as quarantine and biologics control, scientific advances have brought new legal problems.

FOOD AND DRUGS

This Division provides all legal services to the Food and Drug Administration in the enforcement of the Federal Food, Drug, and Cosmetic Act. There is a continuing volume of legal work in this Division. In fact, there has been an increase due in part to the most recent amendments to the Federal Food, Drug, and Cosmetic Act, and in part to the increase in the investigation and enforcement activities of the Food and Drug Administration. There is no indication that the workload will decrease in this area.

OLD AGE AND SURVIVORS INSURANCE

Very substantial amendments to the Social Security Act in 1954, 1956, and 1957 continue to provide a very heavy load for our legal staff in this Division. In addition to the approximately 13.8 million persons to whom coverage was extended by the 1954 and 1956 amendments, several thousand ministers and more than 500,000 State and local government employees were made eligible for coverage by the 1957 amendments. The reduction in the retirement age for women workers and wives, the provision for payment of disability benefits and the change made in the test for determining the status for benefit purposes of wives, widows, husbands and widowers all add to the increase in demand for legal services.

WELFARE AND EDUCATION

The lawyers in this Division serve the Bureau of Public Assistance, the Children's Bureau and the Bureau of Federal Credit Unions in the Social Security Administration; the Office of Education and the Office of Vocational Rehabilitation. They also are called upon to provide some legal services in connection with Federal payments to the American Printing House for the Blind, Howard University, and Gallaudet College.

The workload for the lawyers in this Division has never been light because of the variety and complexity of the offices and programs served. It appears that the scope of these programs, especially in the Office of Education is more likely to increase than remain static. This is likewise true regarding the OVR which has expanded substantially in recent years. Every new administrative activity generates an additional demand for legal service.

REGIONAL AND FIELD

Legal services furnished by regional attorneys and their staff to regional directors and regional representatives correspond, in kind, to those rendered by the departmental staff. All programs are serviced in the field except the Food and Drug Administration, with the greater portion of the workload in each region coming from the OASI program. We have from 2 to 3 attorneys in each region, and with the workload increasing over the past few years, this staffing provides for a minimum acceptable standard of legal services.

OFFICE OF THE SECRETARY

SURPLUS PROPERTY UTILIZATION

STATEMENTS OF LEONARD W. A'HEARN, ACTING DIRECTOR, OFFICE OF FIELD ADMINISTRATION, ACCOMPANIED BY JAMES F. KELLY, DEPARTMENT BUDGET OFFICER

APPROPRIATION ESTIMATE

"SURPLUS PROPERTY UTILIZATION

"[Surplus property utilization:] For expenses necessary for carrying out the provisions of subsections 203 (j), (k), (n), and (o), of the Federal Property and Administrative Services Act of 1949, as amended, relating to disposal of real and personal excess property for educational purposes, *civil defense purposes*, and protection of public health, [$502,000] *$632,000.*"

Funds available for obligation

	1959 appropriation	1959 budget estimate	1959 House allowance
Appropriation or estimate	$502,000	$632,000	$632,000
Comparative transfer from Federal Civil Defense Administration	130,000		
Total available for obligation	632,000	632,000	632,000

Obligations by activity

	1958 appropriation		1959 budget estimate		1959 House allowance	
	Positions	Amount	Positions	Amount	Positions	Amount
Surplus property utilization	91	$632,000	91	$632,000	91	$632,000

Obligations by objects

Object classification	1958 appropriation	1959 budget estimate	1959 House allowance
SUMMARY OF PERSONAL SERVICES			
Total number of permanent positions	91	91	91
Full-time equivalent of all other positions			
Average number of all employees	88	88	88
Number of employees at end of year	89	89	89
01 Personal services	$514,800	$514,785	$514,785
02 Travel	49,850	49,850	49,850
03 Transportation of things	2,350	1,220	1,220
04 Communication services	19,920	19,920	19,920
05 Rents and utilities			
06 Printing and reproduction	2,500	2,500	2,500
07 Other contractual services	5,500	5,500	5,500
08 Supplies and materials	4,100	4,100	4,100
09 Equipment	1,000	1,000	1,000
11 Grants, subsidies, and contributions: Contribution to retirement fund	31,815	32,960	32,960
13 Refunds, awards, and indemnities			
15 Taxes and assessments	165	165	165
Total obligations	632,000	632,000	632,000

Summary of changes

	Positions	Amount
1958 actual appropriation	71	$502,000
Comparative transfer from "Operations, Federal Civil Defense Administration"	20	130,000
Total appropriation	91	632,000
Deduct nonrecurring costs: Transportation and other miscellaneous		1,145
1959 base	91	630,855
1959 appropriation request	91	632,000
Net change requested		+1,145

	1959 budget estimate	1959 House allowance
Increases: For mandatory items: Retirement contributions annualization (rate of 6.5 percent in 1959, 6.275 percent in 1958 for base positions)	$1,145	$1,145
Total change requested	1,145	1,145

FUNDS REQUESTED

Senator HILL. Mr. A'Hearn.

Mr. A'HEARN. Mr. Chairman, our full statement has been presented to the committee and the money that we are asking for is identical to the amount available last year.

The difference is that last year we received $130,000 by transfer from the Federal Civil Service Administration. As it was nothing but a bookkeeping transaction, the House Appropriations Committee allowed it in the basic appropriation.

In other words, last year we operated with the direct appropriation plus this $130,000 and the House decided to consolidate it in one appropriation.

Senator HILL. And instead of being two separate appropriations you just have the one?

Mr. A'HEARN. Just the one; yes, sir.

Senator HILL. But they did not reduce you any in the consolidation?

Mr. A'HEARN. No, sir, it is the same amount as last year.

Senator HILL. You got the same amount of money as you received last year?

Mr. A'HEARN. Substantially the same as last year.

Senator HILL. In other words, it will enable you to carry on your program for the next fiscal year just as you are doing now?

Mr. A'HEARN. Yes; with the same staff.

Senator HILL. With the same staff and without any additions or real increases, is that right?

Mr. A'HEARN. Yes, sir.

Senator HILL. Thank you, sir. We will insert your statement in the record at this point.

(The statement referred to follows:)

STATEMENT BY ACTING DIRECTOR, OFFICE OF FIELD ADMINISTRATION

The Federal Property and Administrative Services Act of 1949 (Public Law 152, 81st Cong.), as amended, assigned to the Secretary three major responsibilities in the field of surplus property: (1) Determination of surplus personal property needed for educational and public health purposes, including research, and the

allocation of that property to State agencies for distribution to educational and public health institutions; (2) disposal of surplus real property for educational and public health purposes, subject to the 30-day right of disapproval of the Administrator of the General Services Administration; and (3) administering the interests and rights reserved to the United States under the terms and conditions of transfers made for educational and public health services, including the coordination of recapture of property for use during national emergencies. By delegation of authority from the Federal Civil Defense Administrator, the Secretary is also responsible for allocation of surplus personal property for civil defense purposes. During fiscal year 1958, $130,000 will be obtained by transfer from the Federal Civil Defense Administration for this portion of the program under FCDA Delegation No. 5.

PERSONAL PROPERTY

The volume of surplus personal property available for donation to health and educational institutions and civil defense organizations continues to be very high. During fiscal year 1957, General Services Administration advised that approximately $3.5 billions of surplus property was disposed of by various Federal agencies. Of this amount, based on original acquisition cost, $234,862,274 was allocated by this Division to State agencies for surplus property for donation to health and educational institutions and civil defense organizations. During 1958 and 1959 it is estimated that such allocations will continue to rise. They should approximate $250 million each year.

CIVIL DEFENSE

There is included in this estimate for 1959, $130,000 to carry out the delegated civil defense activities relating to this program.

Under FDCA delegation No. 5, authority is given to the Secretary to perform 10 different functions in connection with the donation of personal property for civil defense purposes. These functions include issuance of minimum standards of operation for State agencies; issuance of regulations governing donation of property; development and issuance of forms and procedures; maintaining liaison with other Federal agencies to coordinate policy and resolve problems; allocation of property in conformance with criteria developed by FCDA; processing of applications; maintaining liaison with holding agencies to assure prompt removal of property; and inspection of State agency warehouses to insure prompt distribution to eligible civil defense claimants.

REAL PROPERTY

The number of surplus real properties available for transfer to health and educational institutions also continues to increase. During fiscal year 1957, 255 real property transfers were made, involving an original acquisition cost of $7,845,403. Of these, 56 transfers involved land or land and buildings for use in place, while 199 transfers were made for removal of structures for use offsite. It is anticipated that during fiscal years 1958 and 1959 approximately $12 million in transfers will be made each year.

COMPLIANCE ACTIVITIES

On July 1, 1957, there were 959 compliance and utilization cases (both real and personal property) pending. At the close of fiscal year 1957, 438 real and personal property cases were still active.

COLLECTIONS

Cash collections, as a result of all activities of the Division during fiscal year 1957, amounted to $548,932. In addition, title to 9 parcels of real property, having a fair value of $413,321, was revested in the Government. It is anticipated that cash collections will continue to be in the neighborhood of $500,000 during fiscal years 1958 and 1959.

FUNDS REQUESTED

To carry out these functions, a request of $632,000 is made for 1959, which is the same amount available in 1958.

BUDGET ORDER TO STOP ALTERATION WORK

Senator HILL. Now, Mr. Kelly, is there anything you wish to say for yourself, sir?

Mr. KELLY. I do want to say, on behalf of the Secretary, and all of the witnesses who have been here and on behalf of myself, we certainly appreciate the opportunity you gave us to explain our programs and it was certainly gratifying to have the congressional support that you have indicated for the programs that we are responsible for carrying out.

Senator HILL. Thank you, sir. We appreciate your all being here and the very cooperative and intelligent and helpful way that you presented your testimony. We appreciate it very, very much.

Now, let me ask you this question: I wrote Dr. Burney a letter under date of May 3 asking for comment on a rumored order of the Budget Bureau to the General Services Administration to stop all alteration work on Public Health hospitals. I have that letter here and also have Dr. Burney's reply. Do you have any further or additional information that you can give us on that subject?

Mr. KELLY. No, sir. I know you really haven't had an opportunity to review the file, because I know it just got to you as you walked in the door today.

It is true that a letter did go to the General Services Administration to call a halt to major repairs and improvements pending a review of the individual projects by the Bureau of the Budget.

We immediately got in touch with the Budget Bureau about the impact of this on hospital operations.

As a result of that meeting it has been agreed they would modify their directive. We went over a list of all the projects that the General Services Administration and the Department had agreed on as a part of this year's program. This list of projects amounted to something over $5 million and we cleared up about $2,700,000 of that that they could go ahead on.

Senator HILL. That they could go ahead with?

Mr. KELLY. That they could go ahead with immediately; and on the balance they asked for more detailed explanations of the individual projects to be submitted to the Budget Bureau for review.

Senator HILL. We have had some experience with these Budget Bureau reviews. Did he give you any date when they might get an answer on the remainder of this money that they are going to review?

Mr. KELLY. I can say that in the meeting we had yesterday they agreed that they understood this work was well along and in order not to unnecessarily delay it they agreed they would give the most expeditious handling to it as soon as General Services Administration could get from their field establishments the details.

EFFECT ON WORK PLANNED

Senator HILL. What effect will that have on the work contemplated for the next fiscal year?

Mr. KELLY. Well, as to the effect it is going to have, I do not honestly know. As yet we have not worked out with the General Services Administration on a project-by-project basis the entire 1959 program. I know a lot of work has been done but I do not think we have really reached a resolution on it on a project-by-project

basis with them. Actually, we need a better definition of what it is the Budget Bureau wants to review, such as modernization and improvements, in order that we know what to submit data on. When this is clarified we will have to submit data for these projects for their review before we proceed. This is a step we have not heretofore taken in connection with the repair and improvements of these hospitals. It is a new procedure.

Senator HILL. Now, you speak about a better review. You need a better definition of what the Budget Bureau wants and what the Congress wants and what the Congress expects?

Mr. KELLY. Well, the problem that has developed here is that these funds, unlike almost every other operation we have in the Department, are not appropriated to the Department of Health, Education, and Welfare; but these hospitals are treated like all other general office buildings under the jurisdiction of the General Services Administration. The Congress appropriates the funds for the operation and maintenance of public buildings to the General Services Administration and we have been working with them on the individual projects and have not worked through the Budget Bureau at all. Whatever Budget Bureau involvement there was, was with General Services and not with us.

BUDGET REQUEST FOR CASE-BY-CASE REVIEW

For the first time, the Budget Bureau has asked that these be treated like all other hospitals and that they review them on a case-by-case basis. This came as a new procedure to us and one which will sort of upset the work in progress. We are trying to resolve the matter and at least arrange it so that if they are going to review proposed hospital repair and improvements on a case-by-case basis, we can get our proposals to them as far in advance as possible, so as not to deter the going ahead of the work; and we hope it won't. The matter is sufficiently new that we spent almost all day yesterday meeting on it. As I say, we have brought about a modified directive and authority to go ahead with about half of the work which is now in progress—that is nearing readiness to start work. We have not worked it out any further than that.

Senator HILL. Well, you think you might have some more definite information on this matter within about 10 days?

Mr. KELLY. I certainly would hope that we would have at least the basic procedures cleared up by then and know exactly what projects we can go ahead with and what the criteria will be.

Senator HILL. All right. You prepare a memorandum for us bringing us up to date on this.

Mr. KELLY. I will.

Senator HILL. Can you do that in 10 days' time?

Mr. KELLY. Yes, sir; I will.

LETTER OF BUDGET BUREAU

Senator HILL. Mr. Kelly, could you get a copy of the letter which the Bureau of the Budget wrote to the General Services Administration, and have it inserted in the record at this point?

Mr. KELLY. Yes, sir.

(The letter referred to follows:)

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D. C., April 16, 1958.

Mr. F. MORAN MCCONIHE,
Commissioner, Public Buildings Service,
General Services Administration, Washington, D. C.
(Attention: Mr. William A. Schmidt.)

DEAR MR. MCCONIHE: The need for the Federal Government maintaining general public health hospitals is under intensive study by the Department of Health, Education, and Welfare and the Bureau of the Budget. It is possible that some of these hospitals will be closed or transferred to non-Federal agencies.

Under these circumstances, air conditioning or repairs other than those required by emergencies or the safety of the occupants would not be in the best interests of the Government.

You are, therefore, requested not to proceed with contracting for design or repair work on these hospitals (excluding minor recurring maintenance) without prior clearance with this Bureau. The hospitals covered by this letter are the Public Health Service hospitals in Baltimore, Norfolk, Memphis, Savannah, San Francisco, Chicago, Detroit, Seattle, Staten Island, Boston, Manhattan Beach, Galveston, and New Orleans.

Sincerely yours,

J. J. EIGERMANN,
Acting Chief, Commerce and Finance Division.

CORRESPONDENCE WITH SURGEON GENERAL

Senator HILL. We will also include in the record at this point the exchange of correspondence between the Surgeon General and me on this matter, as well as a letter which I have received from the Labor-Management Maritime Committee expressing their interest in this subject.

(The letters referred to follow:)

WASHINGTON, D. C., *May 3, 1958.*

DR. LEROY E. BURNEY,
The Surgeon General,
United States Public Health Service,
Department of Health, Education and Welfare,
Washington, D. C.

MY DEAR DR. BURNEY: As you know, many of the hospital buildings and outpatient facilities of the United States Public Health Service are badly in need of repair, modernization or replacement, and I can think of no more appropriate time than the present to consider improvement of these facilities.

I shall, therefore, appreciate your furnishing me, as chairman of the Appropriations Subcommittee which handles the Labor-Health-Education-Welfare appropriation bill, full information regarding any recent changes or directives to cut back on any planned physical improvements of Public Health Service hospitals and outpatient facilities. The committee would, I know, be particularly interested in information about any actions taken or plans developed since your presentation to the Committee concerning Public Health Service facilities.

Thanking you for your prompt attention to this request and with kindest regards, I am,

Very sincerely,

LISTER HILL,
Chairman, Senate Appropriations Subcommittee on Labor-HEW Bill.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
PUBLIC HEALTH SERVICE,
Washington, D. C., May 8, 1958.

Hon. LISTER B. HILL,
Chairman, Subcommittee on Departments of Labor, and Health, Education, Welfare and Related Agencies, Committee on Appropriations, United States Senate, Washington, D. C.

DEAR MR. CHAIRMAN: Thank you very much for your letter of May 3, 1958, expressing your interest in providing badly needed repairs, modernization and replacement of the Public Health Service hospitals and outpatient clinics and requesting information as to any directives to cut back on any planned physical improvements in the facilities.

During the past several years the Public Buildings Service has worked in close collaboration with us in maintainung an inventory of our most pressing needs arising from obsolescence, changes in functions due to new medical advances, and deterioration and age of our structures. Following the submission of the survey reports by outside experts who have studied our hospitals during the past 2 years, we made a resurvey of our present needs in December 1957. At that time and with the full cooperation of the Public Buildings Service, we planned a series of repairs and improvements to cover some of the most emergent and urgent deficiencies.

On March 6, 1958, we were advised by the Bureau of the Budget that they questioned certain improvements relating to air conditioning of specific hospitals, and advised us that they had requested the Public Buildings Service to defer further action on these projects. We have subsequently been in consultation with the Budget Bureau with respect to these specific projects but have not, as yet, fully resolved the issues.

More recently we were advised that the Budget Bureau had requested that the General Services Administration defer air conditioning and repairs other than those required by emergencies for the safety of the occupants, or maintenance work of a minor or recurring nature until prior clearance had been obtained from the Budget Bureau on a project-by-project basis. Immediately upon being advised of this action, officials of the Department contacted officials of the Budget Bureau to discuss the significance of these restrictions in terms of the operation of the Public Health Service hospitals. Meetings have been held with the Budget Bureau which have resulted in an agreement to modify this directive. A listing of all work planned for the remainder of this fiscal year was reviewed and a substantial amount was cleared so that the Public Buildings Service can proceed as planned. Other items were identified as being large scale modernization or major repairs in which the Budget Bureau has requested that specific information with respect to those projects be submitted for more detailed review before the work is authorized to proceed.

As you know, at the Budget Bureau's request, we undertook to study the economic feasibility of continued operation of four of our hospitals. You are also aware that the Hoover Commission recommended discontinuance of free medical care to merchant seamen. While the need for the four hospitals and the Hoover Commission recommendation have been given a considerable amount of study, no final conclusions have been reached by the administration. For this reason it has been difficult to resolve issues with respect to certain long range major modernization and improvement projects. However, our most recent discussions with the Budget Bureau have established the need for immediate steps to conclude the study of the Hoover Commission recommendation and resolve the issue as quickly as possible in order that this unresolved issue will not continue to impair the operations of the hospitals.

We are most appreciative of your interest in this and other problems of the Public Health Service and I will make myself available to supply any additional information which you may desire.

Sincerely yours,

L. E. BURNEY, *Surgeon General.*

LABOR-MANAGEMENT MARITIME COMMITTEE,
Washington, D. C., May 8, 1958.

Hon. LISTER HILL,
Chairman, Senate Labor and Public Welfare Committee,
Washington, D. C.

DEAR SENATOR HILL: Appropriate steps should be taken to see that the Bureau of the Budget does not ultimately abolish the Public Health Service through the medium of budgetary attrition. Bureau of the Budget personnel responsible for passing on budget requests of the Public Health Service appear to us to be frankly and openly opposed to the Public Health Service program, as it relates to the medical and hospital care of its beneficiaries in its general hospitals.

A rather consistent program aimed at diminishing and, we feel, ultimately closing down the Service by budgetary action has been going on since the end of World War II. For example, in 1946 the Bureau of the Budget closed 10 Public Health Service hospitals by not approving moneys to continue them. In 1952 the Bureau of the Budget attempted to seriously reduce the Public Health Service hospitals by instructing the Secretary of Health, Education, and Welfare to not ask for appropriations to continue general medical and hospital service to the majority of the Service's beneficiaries. It appears to us that at no time since 1946 has the Bureau of the Budget permitted the request for appropriation of sufficient moneys to permit the maintenance of the best medical and hospital standards, or the providing of adequate equipment and buildings to carry on the functions.

In 1958 the Bureau did approve a request for moneys to at least begin a program of bringing the care program up to date. In the 1959 budget they apparently denied a continuation of this program. This was accomplished through a cut below the 1958 appropriation and the disallowance of approximately $4 million additionally needed funds, which would have been required to place needed improvements into effect. The 1959 action of the Bureau of the Budget seems to us, merely a reinstitution of an aggressive policy which, in effect, modifies existing congressional policy via the budget process.

Under date of April 16, 1958, the Acting Chief of the Commerce and Finance Division of the Bureau of the Budget sent a letter to the Commissioner of the Public Buildings Service, requesting the General Services Administration not to proceed with contracts for design or repair work on Public Health Service facilities other than those required by emergency or safety. In this communication the Bureau of the Budget stated that the need for maintaining Public Health Service hospitals was under intensive study by the Department of Health, Education and Welfare and the Bureau of the Budget. As a matter of fact, we believe from our review of the matter that the Department of Health, Education, and Welfare was not even apprised of the fact by the Bureau of the Budget that such a letter was being considered or had been sent. The Department got its information from the General Services Administration through a curtailment order on work and progress.

This letter simply highlights what we believe is an apparent determination of the Bureau of the Budget to effectuate ultimate closing of the entire Public Health Service general hospital program. We are frank to admit that we do not know how the Congress can effectively change this process of the Bureau. However, we submit that some positive action is indicted which will bring to a halt this apparent longstanding attempt on the part of the Bureau to reduce and ultimately eliminate the Public Health Service general hospital program.

We most strongly urge that your committee take some action which will cause the Bureau of the Budget to more appropriately carry out its responsibility to maintain the best medical and hospital care possible under existing law.

Respectfully yours,

EARL W. CLARK,
HOYT S. HADDOCK,
Co-Directors.

SPECIAL HOSPITALS EXCLUDED FROM ORDER

Senator HILL. Now, you speak about your hospitals. Does that include the NP hospitals at Fort Worth and at Lexington?

Mr. KELLY. Well, the letter that was sent out to the General Services Administration included only the general hospitals and excluded Lexington and Fort Worth.

Senator HILL. What about Carville?

Mr. KELLY. It also excluded the one at Carville.

However, the discussions yesterday indicated that the directive would be modified in two respects: First, that it was too broad in its application. It should have been restricted to only the most major type of repair and improvements, but was too narrow in its application to hospitals and would be modified to include all of the PHS hospitals.

Senator HILL. Will you get us all of the detailed information you can on that?

Mr. KELLY. Yes, sir.

Senator HILL. You submit a memorandum on that bringing us right up to date by the 20th of the month.

Mr. KELLY. I will do that.

(The information requested appears on p. 1743)

Senator HILL. Is there anything else you would like to add?

Mr. KELLY. No, sir.

Senator HILL. If no one else has anything to add, we certainly would like to say that we are very, very much obliged to you.

The committee will stand in recess until Monday, May 12, 1958, at 10 a. m.

Whereupon, at 3:10 p. m., Thursday, May 8, 1958, the committee recessed to reconvene at 10 a. m., Monday, May 12, 1958.

LABOR—HEALTH, EDUCATION, AND WELFARE APPROPRIATIONS, 1959

MONDAY, MAY 12, 1958

United States Senate,
Subcommittee of the Committee on Appropriations,
Washington, D. C.

The subcommittee met at 10 a. m., pursuant to notice, in room F-82, the Capitol, Hon. Lister Hill (chairman of the subcommittee), presiding.

Present: Senators Hill, Hayden, and Smith.

HEALTH, EDUCATION, AND WELFARE

Nursing Programs

American Nurses Association

STATEMENT OF MISS AGNES OHLSON, PRESIDENT, ACCOMPANIED BY MISS JULIA C. THOMPSON, WASHINGTON REPRESENTATIVE

NURSE TRAINEESHIP PROGRAM

Senator Hill. The committee will kindly come to order.

Miss Agnes Ohlson, president of the American Nurses Association, we will be very happy to have you come around now.

Miss Ohlson. May Miss Thompson accompany me?

Senator Hill. Fine. Nice to have you.

Miss Ohlson. This being Florence Nightingale's birthday, we hope all goes well for the nurses.

Senator Hill. Have you filed your statement?

Miss Ohlson. We have filed our statement, and may I present it at this time, Senator Hill?

As you know, I am president of the American Nurses Association, and I am delighted to speak for the nurses today.

Senator Hill. Thank you.

Miss Ohlson. You also are very well familiar with the fact that the Department of Health, Education, and Welfare requested, and the House of Representatives approved, the $3 million for the nurse traineeship program under title II which authorizes the $5 million they have been awarded on the program for approximately 1,400 nurses. During the past year more than 3,000 applied.

Senator Hill. More than 3,000?

Miss Ohlson. The $3 million appropriated for 1958 provided scholarships for only 773 of those.

Senator Hill. Although there were 3,000 applications?

Miss OHLSON. Yes, of qualified applicants. The present demand for qualified administrators, supervisors, and teachers of nursing is far in excess of the number available now or likely to be graduated in the future unless we do get substantial amounts of scholarship aid.

If we are to improve the patient care now, we must make a great impact upon the current deficit of professional health personnel, particularly in those priority needs.

Senator HILL. Of course, that deficit is growing greater all the time because our population is growing.

Miss OHLSON. Because of that and then because we are not meeting the current one.

Senator HILL. Not meeting the present one, for that matter.

FINANCIAL ASSISTANCE FOR GRADUATE EDUCATION

Miss OHLSON. We fall back just that much more because we cannot give the type of care we would like to, without the administrators, supervisors, and teachers.

So we hope that Congress will act now in providing more adequate financial assistance for the graduate nursing education.

We would strongly urge that you act on the measures that are before you for that purpose.

It has been estimated that 13 percent of the professional nurses will need postbaccalaureate education. If we are to meet a reasonable goal of 300 professional nurses per 100,000 population, and that is a very moderate estimate, for that we would need a further personnel increase in the administration, supervision, and teachers, and for research. To do that, we should graduate 520,000 nurses from the advanced programs in 1956.

At the present rate of enrollment in the master's programs, we can expect no more than 800 annual graduations.

Senator HILL. Not more than 800 at the present rate, with the present funds.

Miss OHLSON. That is right. Yet the schools that are conducting the graduate nurse programs have indicated that their facilities and faculty could take 1,400 a year, so that would be a bit better, but still far short.

That demonstrates our feeling of tremendous need for the traineeship program.

We have evidence that the graduate programs can accommodate more students and that there are many more eligible candidates for traineeships than can be provided for with the $3 million requested by the Department and approved by the House of Representatives.

On that basis, we would urge the $7 million.

Senator HILL. Did you appear before the House?

STAND OF AMERICAN ASSOCIATION OF NURSES

Miss OHLSON. Miss Thompson and Mrs. Carroll did, and we have had conferences with Mr. Fogarty since that time. So I think he would look forward favorably to concurring with you on the favorable recommendation, if possible, for the reestablishment of the cut.

Further, the American Association of Nurses urges that appropriation for title I, for the public health nurses, be increased to at least

$5 million. The Department requested and the House approved only $2 million. For this program also, there have been more qualified nurse applicants than there are traineeships available.

To date, 460 nurses and nursing students have received grants preparing them for staff positions in public health nursing. While this has made an impact on the need, the demand is still great and is increasing. You are familiar with that.

Certainly, with the growing emphasis on preventive and rehabilitative aspects, home care of the chronically ill, we need many more public health nurses.

Both title I and title II expire in 1959. It was only a 3-year program. So we urge, therefore, that Congress give adequate financial support at this time to this program.

We look forward to the conferences. You remember we have an evaluation conference scheduled according to the law, and that comes up in August. We are looking forward to what that conference will bring for us as far as recommendations are concerned.

We do hope, of course, that the Surgeon General is being provided with sufficient funds so he can hold a broadly represented conference which will really result in sound recommendations that Congress looked for when they put that into the legislation which was very forward looking legislation.

The American Nurses' Association supports the request for $4 million for grants to State vocational education departments for the expansion and improvement of practical nurse education.

Then we urge favorable consideration of requests for funds for research in nursing and for the training of nurses for research in their field of practice.

Senator HILL. How much do you ask for that?

Miss OHLSON. We urge consideration of the $361,000 for the Division of Nursing Resources, and then we would urge a consideration of what the National Institutes of Health have included, which would be separate from that.

The Division of Nursing Resources are the ones that are carrying out the administration of the traineeship program. We understand that in doing that they have had to divert some of their present staff and their present funds in order to carry out and administer their requirements of title XXII.

Then, there is one further area, and that is that last year the Bureau of Labor Statistics, in cooperation with the Women's Bureau of the Department of Labor, completed a survey of earnings and other benefits paid to hospital personnel in 16 metropolitan areas.

CONDITIONS AFFECTING HOSPITAL EMPLOYMENT

For the first time, we had authoritative data on certain conditions of employment that affected approximately 1,300,000 employees in hospitals of this country.

We would like to commend the Labor Department and the Bureau of Labor Statistics for the quality of the work on that important project. We hope that provisions can be made for a second survey of that type within the next few years.

Those who do carry the responsibilities for meeting health needs really need more information in the field of hospital economics.

The essential consideration in providing the health services are the economic rewards provided for hospital personnel. So we note with a certain amount of dismay that no provision is made now for continuing periodic surveys of salaries of hospital personnel, which is one of the largest groups of employed persons in the country.

We recognize the nature of the great decisions to be made by Congress in its action upon the budget of the Federal Government. But we do trust that consideration will be given to the needs of those programs which do affect the health and welfare of our people.

Thank you very much, Senator Hill.

Senator HILL. We appreciate very much your presentation. Is there anything you would like to add, Miss Thompson?

Miss THOMPSON. I have nothing to add unless you have some questions.

Senator HILL. You have brought us an informative, very helpful, and splendid statement. We want to thank you very much. We appreciate your presence very much.

Miss OHLSON. We hope we will get favorable consideration.

(The statement referred to follows:)

STATEMENT OF AGNES OHLSON, R. N., PRESIDENT, AMERICAN NURSES ASSOCIATION

I am Agnes Ohlson, president of the American Nurses' Association, the national organization of registered professional nurses. I appear here today to present the views of the association on certain items relating to the field of nursing which appear in the appropriations in H. R. 11645. I wish to speak to the provisions for graduate nurse and public health traineeships, for practical nurse training, and for nursing research.

The Department of Health, Education, and Welfare requested, and the House of Representatives approved an appropriation of $3 million for the nurse traineeship program established under title II of the Health Amendments Act of 1956. The American nurses strongly urge that this amount be increased to at least $7 million.

Title II of Public Law 911 authorizes the granting of traineeships to graduate nurses preparing for positions in teaching, supervision, and administration. Since the measure was enacted in 1956, $5 million in grants have been awarded under this program to approximately 1,400 nurses. During the past year more than 3,000 nurses applied and qualified for grants. The $3 million appropriated for 1958 provided traineeships for only 773 of these qualified applicants.

The present demand for qualified administrators, supervisors, and teachers of nursing is far in excess of the number available now, or likely to be graduating in the future unless substantial amounts of scholarship aid are provided. If we are to substantially improve patient care now, we must make a greater impact upon the current deficit of professional health personnel, particularly in those areas of greatest need. Improvement and expansion of health services, and of nursing education, are hampered by the present lack of a sufficient number of prepared administrators, supervisors, and teachers. If, in the future, we are to meet the nursing needs of our growing population, both qualitatively and quantitatively. Congress must act now to provide for sufficient financial assistance to graduate education in nursing. This association has long urged that Congress act on measures to increase the numbers of professional nurses concurrently with congressional action which leads to an expansion of hospitals and other health services.

It has been estimated that 13 percent of professional nurses will need post-baccalaureate education.[1] If we are to meet a reasonable goal of 300 professional nurses per 100,000 population, and if a sufficient number of these are to be prepared for essential functions in administration, supervision, consultation teaching and research, we must graduate at least 5,200 nurses from advanced programs by 1965. At the present rate of enrollment in the master's programs, we can expect no more than 800 annual graduations. At this time, schools conducting graduate programs in nursing have indicated that their facilities and faculty are sufficient to graduate 1,400 each year.[2]

[1] Nurses for a growing Nation. National League for Nursing, New York, N. Y.

[2] Educational Resources for the Preparation of Nurses, pt. 2. National League for Nursing. Nursing Outlook, February 1958.

The need for expansion of the traineeship program is clear. We have evidence that the graduate programs can accommodate more students. There are many more eligible candidates for traineeships than can be provided for with the $3 million requested by the Department and approved by the House of Representatives. The American Nurses' Association urges the Senate to increase to at least $7 million the appropriation for carrying out title II of Public Law 911.

Further, the American Nurses' Association urges that the appropriation for title I of Public Law 911 be increased to at least $5 million. The Department requested, and the House approved, only $2 million for traineeships for professional public health personnel. For this program also, there have been more qualified nurse applicants than traineeships available. To date, 460 nurses and nursing students have received grants for study preparing them for staff positions in public health nursing. While this has made some impact on the need for qualified public health nurses, the demand is still great and is increasing. With the growing emphasis on preventive and rehabilitative services, and upon home-care programs for the chronically ill, many more public health nurses will be needed.

Both title I and title II of Public Law 911 expire in 1959. This association urges Congress to provide adequate financial support for these traineeship programs at this time. We look forward with great interest to the conferences called by the Surgeon General under the provisions of the law for the purposes of evaluating the legislation and recommending as to the nature of further congressional action. We hope the Surgeon General is being provided with sufficient funds to hold broadly representative conferences which will result in sound recommendations for future financing of public health training and of graduate education in nursing.

The American Nurses' Association supports the request for $4 million for grants to State vocational education departments for the expansion and improvement of practical nurse training.

We urge your favorable consideration of the requests for funds for research in nursing and for the training of nurses for research in their field of practice. If we are to provide for the maximum contribution of nurses toward meeting the health needs of the country, we must continue to expand our knowledge about nursing practice. We must continue to explore means of utilizing nursing personnel to meet the changing needs of the community for nursing care. Funds for this purpose should come from the Federal Government as well as from other sources. Therefore, the American Nurses' Association urges your favorable consideration of the request for $361,000 for the Division of Nursing Resources, and the provisions for nursing research grants by the National Institutes of Health. It should be noted that the Division of Nursing Resources has carried out the administration of the nurse traineeship program, and is now preparing for the evaluation conference, with funds and staff diverted from other necessary programs.

Last year the Bureau of Labor statistics, in cooperation with the Women's Bureau, Department of Labor, completed a survey of earnings and other benefits paid to hospital personnel in 16 metropolitan areas. For the first time, we had authoritative data on certain conditions of employment affecting the approximately 1,300,000 employees of the hospitals of this country. We wish to commend the Bureau of Labor Statistics for the quality of its work on this important project; and hope that provision will be made for a second survey within the next few years. Those who carry responsibility for meeting the health needs of communities need more information than is now available on hospital economics. An essential consideration in providing health services is the economic rewards provided for hospital personnel. We note with dismay that no provision is now made for continuing periodic surveys of the salaries of hospital personnel, one of the largest groups of employed persons in this country.

The American Nurses' Association recognizes the nature of the grave decisions to be made by Congress in its action upon the budget of the Federal Government. We trust that due consideration will be given to the needs of those programs which are so vital to the health and welfare of our people.

COMMUNICATIONS

Senator HILL. The committee is in receipt of numerous communications from State nurses' associations, representing nearly one-half of the States, urging support for increased funds for title I and II

of the Health Amendments Act of 1956. We will include these letters at this point in the record.

(The letters referred to follow:)

OREGON NURSES ASSOCIATION, INC.,
Portland, Oreg., May 9, 1958.

Hon. LISTER HILL,
Senator, United States Congress,
Senate Office Building, Washington, D. C.

DEAR SENATOR HILL: The members of the Oregon Nurses Association support the request being made by the American Nurses Association for an increase in the funds to be appropriated for the nurse traineeship program established under title I and II of the Health Amendments Act of 1956. We are deeply concerned that the House of Representatives did not increase the appropriations for these programs in the face of critical needs for health personnel.

The schools of nursing in Oregon have indicated that more students could be admitted if a sufficient number of qualified teachers, supervisors, and head nurses were available. The population growth in Oregon, expanding health services and the rapid increase in the number of aged in the population makes the preparation of an increased number of qualified practitioners in all categories of nursing imperative. Both the quality and the quantity of future nurses will be deeply affected by the supply of teachers and supervisors.

The School of Nursing of the University of Oregon Medical School accepts students in its graduate programs from neighboring States which have no facilities for the education of the graduate nurse. Since the beginning of the traineeship program it has had more than twice as many qualified applicants than available grants.

We strongly urge the Members of Congress to place a high priority on providing financial aid in order to increase the number of qualified public health personnel, and qualified teachers, administrators, and supervisors of nursing.

Respectfully,

EVELYN H. CONNER, R. N., *President, ONA.*

UTAH STATE NURSES' ASSOCIATION,
Salt Lake City, Utah, May 9, 1958.

Hon. LISTER HILL,
United States Senate,
Washington, D. C.

DEAR SENATOR HILL: It is not possible to express the feeling of deep dismay felt by members of the Utah State Nurses' Association when they were informed that the House Committee on Appropriations reported out of committee H. R. 11645 without providing any increase in funds for the traineeship programs under title I and title II of Public Law 911. As the bill now goes to the Senate Committee on Appropriations, we are appealing to you as chairman of the Subcommittee on Departments of Labor, Health, Education, and Welfare of this committee, for your support in providing an increase in the appropriations for the traineeship programs.

Due to the great expansion programs in all of our major hospitals and other health facilities in Utah, there is a great necessity for an increase in health personnel. Also, the increasing demands on the nursing profession in Utah brought about by the growing population, the increase in the number of the aged, and other factors, demands that Congress places a high priority on providing financial aid to increase the number of qualified teachers, administrators, and consultants in nursing.

We do not have schools in Utah which provide for graduate nursing education beyond a baccalaureate degree except in the psychiatric area. The low salaries in nursing are not conducive to out of State educational expenses without financial aid.

Utah schools of nursing cannot be expanded nor improved because of the dearth of qualified faculty. Nursing services cannot meet the demands in our State without an increase in qualified administrative and supervisory personnel.

One of the principal functions of the American Nurses' Association is that of serving as the spokesman for all registered professional nurses on legislation.

Please give the testimony which will be presented on behalf of them your deepest thought and consideration.

Sincerely yours,

Lena Besendorfer, R. N.
(Miss) LENA BESENDORFER, *President,*
Utah State Nurses' Association.

Maxine Cope, R. N.
(Mrs.) MAXINE COPE, *Chairman,*
Committee on Legislation.

LITTLE ROCK, ARK., *May 9, 1958.*

Hon. LISTER HILL,
United States Senate, Washington, D. C.

DEAR SIR: The nurses of the Arkansas State Nurses Association were deeply concerned when the House Committee on Appropriations for the Department of Labor, Health, Education, and Welfare and related agencies were in session: and greatly disappointed that the committee did not provide for an increase in funds for the traineeship program under title I and title II of Public Law 911.

On behalf of the American Nurses Association, of which the Arkansas State Nurses Association is a constituent, Mrs. Margaret Carroll appeared before a House congressional subcommittee and urged an increase in Federal funds for traineeships for graduate nurses and for professional public health personnel.

Briefly, the reason for the substantial increase can be found in one word: Need.

Reasons for the need are obvious: A growing population with the highest standard of living ever experienced by any nation can afford and demand good health care. The expanding health services; especially the many needed hospitals completed and under construction increase the demands for nursing service.

Since the enactment of the Health Amendment Act of 1956, $5 million has been awarded to 1,400 nurses studying for positions in teaching, supervision, and administration. The $3 million appropriated for 1958 permitted the granting of less than 800 traineeships while there were 1,400 qualified applicants. In the field of public health, there has also been more qualified nurse applicants than traineeships available.

The traineeship program has been good as far as it has gone, but, the need is greater than originally visualized.

The members of the Arkansas State Nurses Association urge your support of an increase in funds of title I and title II of Public Law 911.

Sincerely,

(Mrs.) MAXINE OTEY,
Chairman, Legislative Committee,
Arkansas State Nurses' Association.

THE OHIO STATE NURSES ASSOCIATION,
Columbus, Ohio, May 9, 1958.

Hon. LISTER HILL,
United States Senate,
Washington, D. C.

MY DEAR SENATOR: The Ohio State Nurses Association urges the Senate to increase the appropriation for administering title II of Public Law 911 to at least $7 million and further urges that the appropriation for title I of Public Law 911 be increased to at least $5 million.

The 30,000 registered professional nurses of the State of Ohio are gravely concerned with the necessity for an increase in funds at this time and are dismayed that the House of Representatives did not increase the appropriations in the face of critical needs for health personnel.

We are sure the Senator realizes that many factors have brought about increasing demands upon the nursing profession. The growing population in the State of Ohio, the number of aged and the growing awareness of our responsibility to the aged, the need for expanding and improving health services to keep pace with medical achievements and the serious shortage of qualified public-health personnel, teachers, administrators, and supervisors of nursing make it imperative that funds be provided in sufficient amounts to carry out titles I and II of Public Law 911.

At present, there are more qualified nurse applicants than traineeships available. If we are to continue to meet the nursing needs of the State of Ohio we must provide traineeships for all qualified students in the nursing profession.

The Ohio State Nurses Association urges your favorable consideration of its request to increase the appropriations and provide the funds which are vital to the health and welfare of the citizens of Ohio.

Very truly yours,

DOROTHY A. CORNELIUS, R. N.,
Executive Secretary.

RHODE ISLAND STATE NURSES ASSOCIATION,
Providence, R. I., May 9, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Departments of Labor, and Health, Education, and Welfare, Senate Committee on Appropriations, Senate Office Building, Washington, D. C.

DEAR SENATOR HILL: We have been advised that our national president of the American Nurses Association, Miss Agnes Ohlson, expects to appear next week before your Subcommittee on Departments of Labor, and Health, Education, and Welfare of the Senate Committee on Appropriations. At that time, she will urge your continued interest and support of the proposals for additional funds under Public Law 911 for title I—Public health traineeships, and title II—graduate nurse administrators, supervisors and teachers, and for nursing research and practical nurse education.

Our State board of directors is unanimous in their support of the request to increase the appropriations for title I from $2 million to $5 million and to increase title II from $3 million to $7 million.

Senator Pastore has informed you of our visit with him in April concerning the matter. We wish to reemphasize the sincere appreciation of the members of the Rhode Island State Nurses Association for the opportunities for advanced professional preparation which the Health Amendments Act of 1956 has made possible. From a survey done in our State this year, we find 14 graduate nurses in Public Health and 26 in hospitals who desire assistance.

In view of the expanding hospital building programs, the demand for qualified administrators, supervisors, and teachers is a continued one, not only in our own State but throughout the Nation, and increased Federal assistance is essential.

Therefore, in requesting your continued efforts on behalf of improved health care for the American people, we are confident that your committee will do everything possible to make the additional funds available.

Again, we assure you of our appreciation of your interest and continuing efforts.

Respectfully yours,

RUTH L. ROCHFORD,
President.
MARGARET WENING,
Chairman Committee on Legislation.

INDIANA STATE NURSES ASSOCIATION,
Indianapolis, Ind., May 9, 1958.

Hon. LISTER HILL,
United States Senate, Washington, D. C.

DEAR SENATOR HILL: This letter is to express our deep concern that the appropriations under titles I and II of the Health Amendments Act were not increased in the House and to urge that the amounts requested by the American Nurses Association be carefully studied by your committee.

The traineeships granted under this act are vitally needed and, in view of the reluctance of most legislatures to help underwrite the cost of nursing education, if not granted, the present nursing shortage can grow indeed grave.

We are not only graduating too few nurses now, due to the lack of prepared teaching and supervisory personnel, but cannot hope to take care of the potential the increasing population will bring unless substantial aid is continued and increased.

Some idea of the national dilemma can be gained from the current situation in Indiana, where hospital beds have increased 33 percent since the close of World War II.

Only 1 of Indiana's 23 schools of nursing could admit more students with its present faculty (it has other shortages in dormitories, clinical facilities, etc.). Nine schools of nursing state that they would need 44 additional teachers. In

addition, 13 schools listed 28 faculty positions now unfilled and 14 schools listed 15 positions filled with unqualified teachers. And, as you are aware, a school of nursing must have not only a prepared faculty but qualified directors and supervisors of clinical facilities.

Indiana is so short of public-health nurses, and particularly administrative public-health personnel, that it is impossible to offer more than a few of our students the public-health affiliation they need in their basic training. This is a serious bottleneck to preparing first-level public-health nurses.

The major problem in this picture is that graduate nurses, because of low salaries, find it exceedingly difficult to add to their educational preparation. Please see attached Indiana salary survey done in 1956–57.

Many of our schools of nursing in Indiana are having very real financial difficulties, and two have very recently closed because they were unable to support good nursing programs. A committee composed of representatives of the hospital, medical, and nursing associations has been working diligently in the past year to find solutions for nursing education problems in this State. There is a possibility that a foundation of associations of schools of nursing will be organized to seek private funds to aid the schools of nursing similar to the Association of Private Colleges. Such funds would not, however, solve the shortage of prepared nurses for teaching, administration, and supervisory positions.

The Indiana State Nurses Association endeavored to get State aid a few years ago by introducing a bill in the Indiana General Assembly for $200,000 for scholarships for graduate nurses. It was opposed by the Indiana State Medical Association and received only 17 votes in the senate.

That traineeships offered by Public Law 911 are needed and appreciated is evident in the fact that we had almost 200 applications for the 22 traineeships awarded to Indiana University.

Indiana now has 225 active registered nurses per 100,000 population. Many of these, however, are married women who work only part time. There are two nurse aids in Indiana hospitals for every registered nurse. We need at least 350 per 100,000 to approach giving adequate care to Indiana citizens. The increased appropriations requested by the American Nurses Association for titles I and II of Public Law 911 can materially assist Indiana and all States to provide the kind of nursing care the American public needs. Again we urge your support of the appropriations requested.

Sincerely yours,

E. Nancy Scramlin, R. N.,
Executive Secretary.

Enclosure.

Minimum and maximum salaries

PROFESSIONAL NURSES

	Number of hospitals	Salary range	Average	Mode [1]
1 to 50 beds (hospitals reporting, 33):				
General-duty nurse:				
Minimum monthly	19	$200.00–$275.00	$239.61	$250.00
Maximum monthly	14	240.00– 400.00	273.22	None
Head nurse:				
Minimum monthly	5	235.00– 300.00	272.00	275.00
Maximum monthly	3	295.00– 350.00	315.00	None
Supervisor:				
Minimum monthly	12	230.00– 350.00	280.25	275.00
Maximum monthly	9	245.00– 450.00	314.00	295.00
51 to 100 beds (hospitals reporting, 33):				
General-duty nurse:				
Minimum monthly	13	220.00– 290.00	255.00	240.00
Maximum monthly	8	245.00– 400.00	285.00	270.00
Head nurse:				
Minimum monthly	5	250.00– 300.00	278.00	275.00
Maximum monthly	4	295.00– 425.00	348.00	None
Supervisor:				
Minimum monthly	9	250.00– 350.00	285.00	300.00
Maximum monthly	5	260.00– 500.00	367.00	None
Faculty:				
Minimum monthly	9	200.00– 500.00	359.00	350.00
Maximum monthly	4	275.00– 535.00	415.00	None
101 to 200 beds (hospitals reporting, 24):				
General-duty nurse:				
Minimum monthly	7	210.00– 260.00	245.00	250.00
Maximum monthly	5	280.00– 297.00	288.00	290.00

See footnotes at end of table, p. 1156.

Minimum and maximum salaries—Continued

PROFESSIONAL NURSES—Continued

	Number of hospitals	Salary range	Average	Mode [1]
Head nurse:				
Minimum monthly	6	$255.00–$277.00	$274.00	$275.00
Maximum monthly	5	295.00– 400.00	323.00	295.00
Supervisor:				
Minimum monthly	8	250.00– 300.00	275.00	250.00
Maximum monthly	6	310.00– 400.00	358.00	None
Faculty:				
Minimum monthly	4	250.00– 402.00	316.00	None
Maximum monthly	2	355.00– 510.00	418.00	None
GENERAL-DUTY NURSES				
201 to 300 beds (hospitals reporting, 13):				
Minimum monthly	10	$225.00–$270.00	$247.00	$250.00
Maximum monthly	9	235.00– 375.00	275.00	265.00
301 to 500 beds (hospitals reporting, 3):				
Minimum monthly	1	260.00		
Maximum monthly	1	275.00		
501 beds and over (hospitals reporting, 13):				
Minimum monthly	12	250.00– 335.41	260.87	250.00
Maximum monthly	12	325.00– 407.08	370.67	375.00
HEAD NURSES				
201 to 300 beds (hospitals reporting, 13):				
Minimum monthly	8	$250.00–$305.00	$274.00	$275.00–$285.00
Maximum monthly	6	285.00– 400.00	325.00	
301 to 500 beds (hospitals reporting, 3):				
Minimum monthly	2	260.00– 295.00	247.50	
Maximum monthly	1	310.00		
501 beds and over (hospitals reporting, 13):				
Minimum monthly	12	275.00– 310.83	282.65	275.00
Maximum monthly	12	335.00– 465.83	395.99	400.00
SUPERVISORS				
201 to 300 beds (hospitals reporting, 13):				
Minimum monthly	7	$250.00–$341.66	$304.81	$300.00
Maximum monthly	7	312.00–485.00	379.81	
301 to 500 beds (hospitals reporting, 3):				
Minimum monthly	3	280.00–375.00	327.50	
Maximum monthly	2	350.00–425.00	387.50	
501 beds and over (hospitals reporting, 13):				
Minimum monthly	12	325.00–453.33	338.69	325.00
Maximum monthly	12	375.00–520.83	464.24	475.00
FACULTY				
201 to 300 beds (hospitals reporting, 13):				
Minimum monthly	10	$225.00–$375.00	$277.67	
Maximum monthly	7	330.00–535.00	407.38	
301 to 500 beds (hospitals reporting, 3):				
Minimum monthly	3	285.00–325.00	303.33	
Maximum monthly	3	360.00–500.00	436.66	
501 beds and over (hospitals reporting, 13):				
Minimum monthly	11	325.00–532.50	385.77	$375.00
Maximum monthly	10	355.00–613.75	524.87	535.00
DIRECTOR OF NURSES				
201 to 300 beds (hospitals reporting, 13):				
Minimum monthly	1	$425.00		
Maximum monthly	1	585.00		
301 to 500 beds (hospitals reporting, 3)		(2)		
501 beds and over (hospitals reporting, 13):				
Minimum monthly	8	425.00–425.00	$425.00	$425.00
Maximum monthly	8	585.00–585.00	585.00	585.00

[1] Salary figures occuring most frequently.
[2] None reported.

KANSAS STATE NURSES' ASSOCIATION,
Topeka, Kans., May 9, 1958.

Senator LISTER HILL,
United States Senate, Washington, D. C.

DEAR SENATOR HILL: You have before you for consideration H. R. 11645, which provides appropriations for traineeship programs under titles I and II of Public Law 911.

As a spokesman for nurses in Kansas, may I call your attention to the extreme necessity for increased appropriations. A graduate nurse in Kansas cannot receive the necessary preparation for a position in supervision, administration, or teaching in any of the colleges or universities in Kansas, since the educational facilities are not accredited to give such preparation. This makes it necessary for a nurse to leave the State to receive such preparation, and the cost is always more than if he or she could remain in the State.

We regret that the House of Representatives did not increase the appropriation, even though information of the critical need for health personnel has been made available.

The national average of professional nurses to the entire population is approximately 250 to 100,000. In Kansas, the ratio is 205 professional nurses to 100,000 population. Additional nurses will be needed to staff the hospitals, where 586 new beds are being added. With additional appropriations for nurses to prepare themselves for teaching, it will be possible to increase the enrollment in the schools of nursing.

Nurses are needed in areas such as doctors' offices, nursing homes, and public health, as well as in hospitals. It will be possible to increase the number of graduate nurses if hospitals and schools of nursing have adequately prepared faculty to neet these increased demands upon the nursing profession.

May we solicit your favorable response to these requests?

Sincerely yours,

HULDA O. WEGENER, R. N.,
Executive Secretary.

IOWA NURSES ASSOCIATION,
Des Moines, Iowa, May 9, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Departments of Labor, and Health, Education, and Welfare of the Senate Committee on Appropriations, Senate Office Building, Washington, D. C.

DEAR SIR: May we urge, as the Iowa Nurses Association, that consideration be given to the need for an increase in funds for the traineeship programs, titles I and II of Public Law 911?

As an organization of professional nurses, one of our programs is the counseling and placement service, and, through this particular service, we assist employers in securing qualified personnel for all areas of nursing. It is of real concern to us that we are unable to fill the requests for qualified professional nurses in the areas of administration, teaching, and public health. We have many positions open at this time for directors of nursing service and administrators of small county and community hospitals, for which we are unable to give assistance. Many nurses are not prepared to accept this type of responsibility because of not having had funds to provide for the academic requirements.

It was with real appreciation that we first learned of the availability of the traineeship programs contained in Public Law 911. The traineeships have been beneficial in some degree, but we feel that an increased appropriation would be of great value. Therefore, we urge you to give due thought to our concern.

In our State, due to the Hill-Burton funds, we have had an unusual spurt of hospital construction, and this seems to be continuing. As a professional organization, we are concerned about how we will secure qualified professional staffs for the increasing number of hospitals. We are not saying that hospital construction is not required. We are aware of the situation. But qualified nursing staffs must be available, also, to provide adequate care to the patients. It was, of course, disappointing to note that the House of Representatives did not increase the appropriations for the traineeship programs in the light of our needs, as we see them, in our State.

We hope this letter will be helpful in explaining why the nursing organizations feel the traineeship programs need increased appropriations, and that we are not asking for ourselves, but in the interest of the health and care of citizens of our country.

Sincerely,

MARGARET L. JACOBSEN,
Executive Director.

CALIFORNIA STATE NURSES' ASSOCIATION,
San Francisco, Calif., May 9, 1958.

Re Hearings on H. R. 11645 by Senate Committee on Appropriations, Subcommittee on Labor, and Health, Education, and Welfare

Hon. LISTER HILL,
United States Senate, Washington, D. C.

DEAR SENATOR HILL: The California State Nurses' Association urges your favorable consideration and support of Federal legislation to increase funds for traineeship programs under titles I and II of Public Law 911.

These traineeships have been very successful in California, to the extent that funds have been available. However, the tremendous increase of population in the State, which has brought with it an increase in the number of aged, and expanding health services lead to a need for increasing numbers of qualified public-health personnel and qualified teachers, administrators, and supervisors of nursing.

The California State Nurses' Association notes with concern that the House of Representatives did not increase appropriations for the nurse-traineeship program, established under title II of the Health Amendments Act of 1956. We urge that this amount be substantially increased to $7 million.

In the case of title I of Public Law 911, there have been more qualified nurse applicants in California than traineeships available. Because of growing needs for professional public-health personnel, it is urged that this appropriation be substantially increased to at least $5 million.

The California State Nurses' Association urges favorable consideration to the growing needs of these programs.

Sincerely,

MILDRED BROWN, *President.*

OKLAHOMA STATE NURSES ASSOCIATION,
Oklahoma City, Okla., May 8, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Departments of Labor, and Health, Education, and Welfare of the Senate Committee on Appropriations, Washington, D. C.

DEAR SENATOR HILL: I represent the 2,000 members of the Oklahoma State Nurses Association, a constituent of the American Nurses Association, and wish to present our views on items relating to fields of nursing which appear in the budget requests before your subcommittee.

I am speaking particularly in regard to Public Law 911, titles I and II, which provides for public-health traineeships and traineeships for administrators, supervisors, and teachers in nursing, respectively.

We urge your most thoughtful consideration of what demands the increase of funds which the House approved for hospital construction will have upon the nursing profession and resulting effect upon the sick citizens of our Nation.

We appreciate to the fullest extent the concern of our legislators to provide adequate health facilities for our people. They are to be commended for this act. But beautiful buildings are of little value to a sick man if there is not available to him persons who are properly educated to administer to his needs. The thinner we spread our nursing personnel to cover these hospital beds, the poorer the quality of nursing care given to the patient.

We also fully realize that hospital construction will aid in alleviating the economic slump by making more work available. However, unless we can maintain a healthy citizenry, our economic standards cannot remain at a high level.

Although enrollments in schools of nursing are steadily increasing yearly, our present teaching personnel and facilities, as in our public schools cannot meet the demands of the increased enrollment. To teach the skills of nursing, we must have qualified supervisors, teachers, and administrators. Because of family

responsibilities, most nurses qualified for advanced education cannot enroll in a full-time graduate course without financial assistance.

Professional nurses have spent much time and money in evaluating their own profession, and are keenly aware of its shortcomings. We feel that an increase in title I to $5 million and title II to $7 million will give more nurses an opportunity to become properly educated, and give to the sick people of our Nation the care they are now paying for.

Again I urge that your committee give careful consideration to increasing the appropriation of titles I and II of Public Law 911 in proportion to the $121,200,000 provided to carry out the Hospital Survey and Construction Act.

Sincerely,

OKLAHOMA STATE NURSES ASSOCIATION,
By BERNICE C. SLATER, R. N.,
Executive Secretary.

NEW JERSEY STATE NURSES' ASSOCIATION,
Newark, N. J., May 9, 1958.

Hon. LISTER HILL,
Senate Office Building, Washington, D. C.

MY DEAR SENATOR HILL: Our association is counting heavily on you and the members of your committee to increase appropriations for public health traineeships under title I of Public Law 911 and for traineeships for administrators, supervisors, and teachers of nursing under title II above the amounts approved by the House of Representatives.

We are certain when all the facts are analyzed by you and your distinguished colleagues, including Senator H. Alexander Smith from our own State, that you will see the necessity for increasing the title I appropriation of $2 million and title II appropriation of $3 million.

We note that although the original budget request for hospital construction was $75 million that this was amended to provide $121,200,000.

It seems fundamental to us in the nursing profession that there is little value in providing tremendous increases in hospital construction unless these institutions can be properly manned by competent, trained nursing personnel. This program is especially important to New Jersey where hospital administrators are constantly complaining of the difficulty of obtaining sufficient registered nurses. Some institutions have been compelled to close off part of their facilities for lack of nursing personnel, and have been diverted to other uses.

Please be advised that New Jersey is in the forefront of the States in the examing and licensing of nurses; and only last month Governor Meyner approved a new law for the mandatory licensing of practical nurses, which complements our mandatory act for professional nurses. Thus you see our State is in an exceptional position to benefit from increased appropriations for public health traineeships and also those for administrators, supervisors, and nursing teachers. Unless we have the proper trained personnel for administration, teaching, and supervision, it is extremely difficult to recruit young women to the nursing profession. Thus with our increasing population, particularly among the aged, an expansion of the services by our public institutions and agencies, it is essential that sufficient funds be provided to increase these traineeship programs, without which an increase in hospital bed facilities becomes meaningless.

We have every confidence that after studying all the facts, your committee will increase the title I and title II appropriations; and you may be assured if there is any additional information your committee needs concerning conditions in New Jersey on this subject, we will be extremely happy to furnish it.

Respectfully,

ELEANOR PATRICIA DUFFY, R. N., *President.*

NEBRASKA STATE NURSES' ASSOCIATION,
Omaha, Nebr., May 8, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee Departments of Labor and Health, Education, and Welfare, Senate Committee on Appropriations, Senate Office Building, Washington, D. C.

DEAR SENATOR HILL: The increasing demands for nursing service are fantastic. Only those directly concerned with providing that service are aware of the need for educating more nurses as quickly as possible.

The Nebraska Hospital Association reports that new hospital beds have increased by 1,548 while, during the same period, the number of nurses being graduated has decreased by 16.

In the counseling and placement office of the Nebraska State Nurses' Association, there are unfilled openings for 3 directors of nursing education, and 9 clinical instructors, 37 nurses for administrative and supervisory positions. Many of these requests have been on file for 3 years.

Longevity in Nebraska exceeds that of any other State. This means the care of our aged and chronically ill is an ever-pressing problem.

The previously quoted lack of public health nursing available to Nebraska citizens still holds. Only 4 of our 93 counties employ public health nurses, yet all public health nurses in Nebraska are currently employed.

A recent evaluation of the benefits of Public Law 911 to Nebraska nurses reveals that only 8 nurses obtained traineeships in 1957 and only 3 of those have returned to work in Nebraska.

Therefore, we are deeply concerned that the House of Representatives failed to grant any increase for appropriation under titles I and II of Public Law 911. We heartily endorse the proposal of the ANA that the appropriation for titles I and II of Public Law 911 be increased to $7 million.

While we are primarily concerned with Nebraska's need, may we urge your careful consideration of this need for increased funds to provide adequate health care for all United States citizens.

Sincerely,

MRS. CHARLOTTE SCHULTZ,
Chairman, Commitee on Legislation, NSNA.

MINNESOTA NURSES ASSOCIATION,
St. Paul, Minn., May 9, 1958.

Hon. LISTER HILL,
United States Senate, Washington, D. C.

DEAR SENATOR HILL: We understand that H. R. 11645 passed the House of Representatives on March 25 without any increase in funds for the traineeship programs under title I and title II of Public Law 911. Of course, this news was disappointing to us.

We also understand that this bill will soon be before the Subcommittee on Departments of Labor, and Health, Education, and Welfare of the Senate Committee on Appropriations. Since you are chairman of this committee, I would like to tell you briefly of our needs here in Minnesota.

We have appreciated the traineeships we have received to date. The first year the University of Minnesota had 144 applicants for the 33 traineeships which were available under title II. This program has begun to improve our situation slightly, but there is still a great need for prepared teachers, administrators, and supervisors.

There are so many new hospitals and additions to hospitals under construction in our State that we are continually wondering how they will be staffed when completed.

Other expanding health services and the increase in the aged in our population also call for increased numbers of public-health personnel.

Because of the nationwide critical need for more of the above-mentioned nursing personnel, we urge you to use your influence to increase the funds for the traineeship program. We believe this is essential if we are to have a healthy Nation. New and modern hospitals won't avail much if they are without nurses.

Sincerely,

RAGNA GYNILD, R. N.,
Executive Secretary.

ILLINOIS NURSES' ASSOCIATION,
Chicago, Ill., May 9, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Departments of Labor, Health, Education, and Welfare, Senate Committee on Appropriations, Senate Office Building, Washington, D. C.

DEAR SENATOR HILL: The Illinois Nurses' Association urges your favorable consideration of the request for increased funds for training of nurses and nursing research which will be made to your committee May 12 by the American Nurses' Association.

That statement pointed out that the demand for qualified nursing supervisors, educators, and professional public health personnel far exceeds the available supply nationwide and that only increased appropriations for traineeships under Public Law 911 would make it possible for nurses to obtain the education needed to qualify them for such positions.

Our experience in Illinois underscores the national need.

The Illinois Nurses' Association maintains a counseling and placement service for its members. Employers of nurses such as schools, hospitals, and public health agencies list job opportunities with the placement service.

In 1957, 40 percent of the requests for educational administrators, consultants, and teachers could not be filled. We could not supply applicants for nearly half the positions in institutional nursing service administration, nor could we fill a fourth of the requests for public health nurses.

The 1957 annual report of the schools of professional nursing prepared by the Illinois Department of Registration and Education reveals that there were 64 vacancies on the nursing school teaching staffs last year. This figure does not include head nurses and supervisors, who are responsible for teaching students in the hospital wards. Had figures been available from these two categories, the total number of vacancies would have been significantly higher.

Important as these figures are, however, they do not reveal the most serious aspect of the problem.

The same report shows that of the 784 registered nurse faculty members in the nursing schools (again excluding head nurses and supervisors), 33 percent have no preparation beyond the nursing diploma. That is, they are attempting to teach without having been prepared in teaching methods. Thus, the figure of 64 vacancies, to tell the entire story, should be greatly revised upward to include those positions now filled with persons not fully qualified. The schools cannot be blamed for this situation. A minimum faculty must be obtained, or the school must close. When fully qualified personnel are not available, the less than fully qualified must teach.

We are sure you will agree that under such conditions, nurses, who will bear a major responsibility for the health of the community, are receiving something less than a desirable education.

The unavoidable employment of less than fully qualified personnel applies not only to schools but to public health agencies as well. And here, too, the health of the public must suffer the consequences.

We would like to point out one more area in which improved education made possible by traineeship grants would make a major contribution to the health of the people of Illinois. And that is in relieving the shortage of qualified nurse supervisors.

The shortage of nurses in Illinois is due in part, in our opinion, to the fact that nurses are often not employed in ways which utilize their skills to the maximum. Part of the difficulty is that supervision is the responibility of nurses not prepared in the specialized field of administration.

To sum up, it is the opinion of the Illinois Nurses' Association that an increased appropriation for traineeships under Public Law 911 would result in an increased supply of qualified nurse supervisors, teachers, and public health workers and would provide more adequate nursing care for the people of Illinois.

We were extremely disappointed that the House failed to increase the funds for this program and urge that the Senate do so.

Sincerely,

ANNE ZIMMERMAN, *Executive Secretary.*

NEW HAMPSHIRE STATE NURSES' ASSOCIATION,
Concord, N. H., May 9, 1958.

Senator LISTER HILL,
Chairman, Senate Committee on Appropriations,
United States Senate, Washington, D. C.

DEAR SENATOR HILL: The New Hampshire State Nurses' Association urge the passage of House Resolution 11645—a bill to provide appropriations for traineeship programs (titles I and II, Public Law 911) for graduate nurses, practical nurses, and for nursing research.

Our association would like to have the appropriation increased to $7 million in order to meet the great need for better-qualified graduate nurses for teaching, supervision, and administration in our hospitals, schools of nursing, and public-health agencies as well as the training of practical nurses.

Expanding health services, increased population, and the advancement of medical science require more and better prepared personnel in order to meet the demands of care to all people, in the amount and quality needed to assure good health.

Five nurses in this State have had the advantage of scholarship aid; however, we could use many more. We are hampered in this State now by not having sufficient well-prepared nursing personnel to meet our present need, and also to meet our future need with teachers and supervisors who can prepare well our future nursing personnel.

We thank you and your committee for your favorable consideration of this important bill.

Sincerely yours,

MARY T. MADDEN, *Executive Secretary.*

WEST VIRGINIA NURSES ASSOCIATION, INC.,
Charleston, W. Va., May 12, 1958.

Hon. LISTER HILL,
United States Senate,
Washington, D. C.

DEAR SENATOR HILL: On behalf of over 2,600 registered professional nurses who are members of the West Virginia Nurses Association, Inc., we wish to urge your support of testimony presented by Miss Agnes Ohlson, R. N., president of the American Nurses' Association, on May 12 to the Subcommittee on Departments of Labor and Health, Education, and Welfare and Related Agencies on H. R. 11645.

Members of our professional nursing association have been pleased to benefit from appropriations for traineeship grants by Congress in 1956 and 1957 for titles I, II, and III under Public Law 911. Although no college or university in West Virginia qualifies to obtain traineeships at this time, several nurses from West Virginia have been able to obtain grants under title II in other States.

We feel sure more of our nurses could benefit from these grants in another State if an appropriation of $7 million could be secured for title II. At the present time, 3 of the 17 hospital schools of nursing do not have a director of nursing because there are not qualified nurses available to accept these positions. Several general State-operated hospitals are requesting directors of nursing through professional Counseling and Placement Service of the West Virginia Nurses Association, but we are unable to fill their requests for the same reason. Two hospital schools of nursing have discontinued their programs this past year because they have not been able to secure teaching personnel. At least three hospitals in metropolitan areas of the State have not been able to open new additions within recent months because there are not qualified supervisory personnel available. Several other hospitals are operating new units with a skeleton staff.

Although we have insufficient numbers of prepared personnel in practically every area of nursing in West Virginia, our greatest need at this time seems to be in areas of nursing education and nursing service. An appropriation of $7 million for title II would provide sufficient additional grants in 1958–59 which could substantially improve patient care by providing more and better prepared administrators, supervisors, and teachers in every State.

We wish to urge that the appropriation for title I of Public Law 911 be increased to at least $5 million. Since all of the public health nurses in West Virginia must apply for traineeship grants out of State, too few have been able to secure these to better prepare themselves. At least 4 of the 55 counties in this State are without the services of any public health nurse. Many counties have only one or a very few public health nurses who are not adequately prepared for the many supervisory responsibilities they must assume.

We were extremely disappointed to learn that the House of Representatives did not increase the appropriations requested by the American Nurses' Association for titles I and II. We hope the subcommittee of which you are chairman will be more favorable toward these much-needed appropriations.

Very truly yours,

JULIANN RITTER, R. N.,
Executive Director.

NASHVILLE, TENN, MAY 10, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Labor Health, Education and Welfare,
Senate Appropriations Committee, United States Senate,
Washington, D. C.

DEAR SENATOR HILL: The Tennessee Nurses' Association, the State organization of professional registered nurses and a constitutent of the American Nurses' Association, is deeply concerned about certain appropriations in H. R. 11645 which is before your committee at this time.

We were disturbed and dismayed that the House of Representatives did not increase the appropriations for titles I and II of the Health Amendments Act of 1956. We thought the information and explanations provided by nurses from across the country, as they talked with their Congressmen in March, had pointed up the necessity to increase these programs if we are to even approach the present needs for patient care. It cannot be assumed at this point that this responsibility can be transferred to States because, for one thing, of the wide variations and limitations in the States' laws relative to the use of public funds.

In Tennessee the need for qualified teachers, supervisors, and administrators in nursing is critical. Our recent statewide survey of nursing needs and resources shows a deficit of 21 percent in number of faculty required for our 17 schools. Of the supply we do have 22 percent of directors of schools had no degree, 48 percent of directors had only baccalaureate preparation, 51 percent of instructors had no degree, 43 percent of instructors had only baccalaureate preparation.

Since certain standards of education in any field must be maintained, if the result is people truly qualified, it is significant to note that only 3 of our 13 diploma programs in nursing are fully accredited and 2 of the 4 degree programs. One of the chief reasons for this is the lack of preparation of the existing faculty as well as the shortage of faculty.

Patient care in our hospitals, and especially in tuberculosis and mental hospitals, and in health facilities in communities is suffering from lack of quality as well as quantity of nursing personnel. Based on existing standards for computation of needs for professional nursing personnel, our deficit in hospitals was 753 and only 46 percent of the need for public health nurses was met.

The deficit of nurses is growing steadily and rapidly larger as demands for services are increased due to programs for care for larger number of aged in our population, for the chronically ill and the rehabilitation programs. But probably the greatest factor is the increased and expanded health facilities and greater use of them.

Between 1955 and 1956 in Tennessee, nursing home beds increased by well over 300 and more than 3,000 hospital beds were added. Also, the admission rate to hospitals has become steadily higher. In this year, 1958, 120 hospital beds have been opened, 431 beds are under construction, and 205 beds have been approved for construction.

These factors, which are not peculiar to Tennessee, require that the Congress provide financial aid to increase the number of qualified teachers, supervisors and administrators in nursing, and adequately prepared public health personnel.

Therefore, we strongly urge the Senate to increase the appropriation for title I of Public Law 911 to at least $5 million and the appropriation for carrying out title II to at least $7 million. You are already familiar with the national figures that substantiate this request.

We further urge that the appropriation for the Division of Nursing Resources be increased to at least $500,000. The research tools and consultant service provided by the Division to States, agencies, and institutions (and the Federal Government does not pay the total cost of this program—the recipients participate) has been invaluable to us. In cooperation with the hospital association, we expanded and intensified the studies of utilization of existing personnel with good results. This program should be expanded. It should be noted that the Division of Nursing Resources is carrying the administration of the traineeship program with funds and staff diverted from this and other important programs.

The Tennessee Nurses' Association recognizes the gravity of decisions that must be made in action upon the Federal budget. We trust that the Congress will give due consideration to these programs that are vital to the health and welfare of the people.

Very sincerely yours,

TENNESSEE NURSES' ASSOCIATION,
MARY ELIZABETH DUNN, R. N.,
Executive Director.

ALABAMA STATE NURSES' ASSOCIATION,
Montgomery, Ala., May 9, 1958.

Senator LISTER HILL,
Senate Office Building, Washington, D. C.

DEAR SENATOR HILL: We understand that hearings on H. R. 11645 will be held by the Subcommittee on Labor of the Senate Committee on Appropriations on May 12. As chairman of the subcommittee we are appealing to you to use your influence to increase appropriations under titles I and II of Public Law 911.

Because of the urgent need for additional traineeships for professional nurses to qualify for teaching and supervision, we are requesting an increase in the present appropriation of title II to $7 million.

There are ever growing demands upon the nursing profession brought about by the larger population, increase in the number of aged, expanding health services, more hospitals, and other factors. In Alabama, according to a recent survey, hospital schools of nursing have an immediate need for 45 nurses with bachelor degrees and 42 nurses with masters degrees while collegiate schools report a need for 14 nurses with masters degrees. There is a similar need in other Alabama agencies employing professional nurses. The State public health department states that they have an immediate need for 11 nurses with bachelor of science degrees and 5 nurses with master of science degrees.

Because of the urgent need for qualified professional Public Health personnel, we are asking that the appropriation for title I be increased to $5 million.

Traineeships granted under titles I and II of Public Law 911 in 1956–57, 1957–58 have already made an impression on the nursing profession in this State, 17 of our nurses having availed themselves of the opportunity to secure degrees on a master's level. Many more qualified teachers and supervisors are needed, however, in order to educate nurses to furnish adequate nursing service for Alabama citizens.

The nurses of this State join with those throughout the country in urging you to support their request for increased appropriations for titles I and II of Public Law 911.

Sincerely,

Lillian Smith
Mrs. WALTER BRAGG SMITH, R. N.

WISCONSIN STATE NURSES ASSOCIATION,
Milwaukee, Wis., May 13, 1958.

Hon. Senator LISTER HILL,
Member of Congress,
United States Senate, Washington, D. C.

MY DEAR SENATOR HILL: As chairman of the subcommittee on Departments of Labor and Health, Education, and Welfare of the Senate Committee on Appropriations, the Wisconsin State Nurses Association is urging you to support substantial increases in funds for traineeships in nursing.

The nurses of Wisconsin were deeply concerned that the House of Representatives did not increase the appropriations for these programs in the face of the critical need for health personnel.

We are all aware of the current improvement and expansion of health services through increased hospital construction programs, of the increased importance of public health programs, of the amazing increase in nursing homes to care for our aged, and of the tremendous advances made in nursing education, but the dearth of qualified personnel to staff these important agencies is appalling. We need financial assistance to prepare nurses for these positions if we are to protect the health and welfare of the Nation.

Wisconsin is proud of the high standards of nursing maintained in this State, but feel we will be in a precarious position unless additional means are provided to adequately prepare nurses for public health, administrative, supervisory, and teaching positions.

We sincerely urge you to strongly recommend that the appropriation for title I of Public Law 911 be increased to at least $5 million, and that for title II be increased to at least $7 million.

Sincerely,

MARY M. DOUGHERTY, R. N.,
Acting Executive Secretary.

THE MONTANA STATE NURSES' ASSOCIATION,
Helena, Mont., May 12, 1958.

Hon. LISTER HILL,
United States Senate,
Washington, D. C.

DEAR SENATOR HILL: After our visit with Representatives Metcalf and Anderson and Senator Mike Mansfield, Washington, D. C., March 13, 1958, the Montana nurse representatives were optimistic regarding an increase in funds for the traineeship programs under titles I and II of Public Law 911.

It was an extreme disappointment to us to learn that late on Tuesday, March 25, 1958, the House Committee on Appropriations reported out of committee H. R. 11645, without any provision for increase in traineeship programs.

Positive action, we were so desirous of receiving, is vitally important to help us meet the critical need for preparing additional health personnel.

Equal members of traineeships for the coming year will not meet the financial needs to furnish aid to increase the needed number of qualified public health personnel, teachers, administrators, and supervisors of nursing to thereby provide for the growing population and the increasing demand for health services.

We urge you to take every possible action to assure us that Congress will be informed of the high priority need for increased traineeship funds.

Sincerely

Mrs. HELEN L. HAEGELE, R. N.
President, MSNA.

NORTH CAROLINA STATE NURSES' ASSOCIATION,
Raleigh, N. C., May 12, 1958.

Hon. LISTER HILL,
Subcommittee on Department of Labor and Health, Education, and Welfare of the Senate Committee on Appropriations,
Senate Office Building, Washington, D. C.

DEAR SENATOR HILL: The North Carolina State Nurses' Association wishes to join with the American Nurses' Association in support of increased appropriations for the nurse traineeship program under titles I and II of Public Law 911.

The nurses' professional association, along with other health organizations and agencies, has recognized as our most pressing need that of more properly prepared teachers, supervisors, and administrators. The traineeships provided under the Health Amendments Act during the past 2 years have been very valuable in helping to meet this need, but it is now obvious that these funds need to be increased. Many qualified nurses have applied for these traineeships but have not been accepted because of inadequate funds.

We are much concerned that the House of Representatives did not grant the increase sought in titles I and II, in spite of the critical need for health personnel. Because our population is growing, the number of aged people is increasing, health services, especially hospitals, are expanding, we must increase the supply of qualified public health personnel and the number of qualified teachers, administrators, and supervisors of nursing.

We urge that the recommended increases for the traineeship programs be approved so that $7 million be available for traineeships under title II and $5 million under title I.

Very sincerely yours,

Mrs. MARIE B. NOELL, *Executive Secretary.*

MISSISSIPPI STATE NURSES ASSOCIATION,
Jackson, Miss., May 12, 1958.

Re hearing on H. R. 11645 by Senate Committee on Appropriations, Subcommittee on Labor, and Health, Education, and Welfare.

Senator LISTER HILL,
United States Senate, Washington, D. C.

DEAR SENATOR HILL: The legislative committee of the Mississippi State Nurses Association wishes to concur with the testimony given by Miss Agnes Ohlson, president of the American Nurses' Association, on May 12.

Miss Ohlson is speaking the sentiments of every nurse in the United States, and we want you to support the program which will mean so much in our future planning of the care of the sick in the United States.

Yours sincerely,

(Mrs.) JOHNIE ORIDGE,
Chairman, Legislative Committee.

NEW YORK STATE NURSES ASSOCIATION,
Albany, N. Y., May 9, 1958.

H. R. 11645

Hon. LISTER HILL,
Chairman, Subcommittee on Labor, and Health, Education, and Welfare, Senate Committee on Appropriations,
United States Senate, Washington, D. C.

DEAR SENATOR HILL: During a fairly recent visit to Washington, we had the opportunity of talking with some of our representatives in Congress about the need for increased funds for nursing education under titles I and II of Public Law 911. We were, of course, more than disappointed when the bill (H. R. 11645) was reported out of committee and passed the House of Representatives with no additional appropriations.

We, in New York State, are sadly in need of more and better qualified teachers and administrators if we can begin to meet the demands for good nursing care today, not to speak of the need in the future, which is of grave concern to us as it is reflected in our growing population. New York State is proud of its 118 schools for professional nurses, but feels that the present facilities are not adequate to meet future needs when it will become necessary to recruit and prepare more professional nurses. If facilities are expanded, then it follows that more faculty will be required. In the past 10 years, the number of schools for practical-nurse education has more than doubled. Today, there are 38 schools for practical nursing and, no doubt, this number will be increased many times within the next few years. We ask ourselves where we will secure properly qualified teachers for these important posts. Salaries for professional nurses today are a limiting factor in furthering the professional nurse's education to qualify her for teaching positions.

We have never had a sufficient number of qualified public-health nursing personnel. Now, when patients are being discharged both from our general and psychiatric hospitals at a much earlier date than formerly, the public-health nurse has been given additional responsibilities; therefore, more supervisors and teachers, in addition to the staff public-health nurse, are needed in this field.

Miss Agnes Ohlson, president of the American Nurses Association, of which we are a constituent, will present testimony pointing out the need for increased appropriations in relation to the country as a whole. I think we are safe in saying that 10 percent of the total needs for the Nation are minimal for New York State. Traineeships under both titles I and II have been of great impetus to nursing education in this State. We only wish that a sufficient number could be made available so that more nurses who are eligible could take advantage of them.

In collecting material for the Department of Health, Education, and Welfare for the evaluation of the above two titles, it was more than apparent that additional funds could be used to great advantage. Therefore, we sincerely hope that you will support the position of the American Nurses Association in our request for an increase from $3 million to $7 million, the appropriation under title II, and from $2 million to $5 million, the appropriation under title I.

Sincerely yours,

ESTHER M. THOMPSON, R. N.,
President.

KENTUCKY STATE ASSOCIATION OF REGISTERED NURSES,
Louisville, Ky., May 8, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Departments of Labor, and Health, Education and Welfare of the Senate Committee on Appropriations, United States Senate, Washington, D. C.

DEAR SIR: We would like to call to your attention our interest in the continuation of and an increase in funds for the traineeship programs under titles I and II of Public Law 911.

At the annual meeting of this association last October, a resolution was passed urging us to actively support the continuation of Public Law 911.

The importance of the traineeship programs in the State cannot be overemphasized, due to the increasing demands upon the nursing profession resulting from the growing population, the increased number of the aged, and the constant expansion in health services.

We are most concerned that the House did not increase the appropriation. The need for providing financial aid to increase the number of public-health personnel and the number of qualified teachers, administrators, and supervisors of nursing is most urgent.

In view of this critical need for health personnel, we urge you to support the continuation of Public Law 911 with an increase in funds for titles I and II.

Very truly yours,

(Miss) NELLE B. WELLER, R. N.,
Chairman, Committee on Legislation.

MARYLAND STATE NURSES ASSOCIATION, INC.,
Baltimore, Md., May 8, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Departments of Labor and Health, Education, and Welfare, United States Senate, Washington, D. C.

DEAR SENATOR HILL: We understand that your committee now has before it H. R. 11645, to provide appropriations for the traineeship programs under titles I and II of Public Law 911.

The Maryland State Nurses Association is disappointed that the House of Representatives appropriated only $2 million for title I public-health traineeships, and $3 million for title II traineeships for administrators, supervisors, and teachers of nursing. We hope that your committee will give serious consideration to increases in these appropriations.

You are well aware of the unmet needs for health personnel throughout the United States. The unmet needs for qualified teachers, supervisors, and administrators for schools of nursing, hospitals, and nursing homes, as well as for public-health agencies, is of grave concern to us in Maryland. The expansion of health facilities, the increasing population, and the increasing needs of older people add to the problems related to the inadequacy of health personnel.

During the fiscal year 1956–57, a total of 16 individuals from Maryland received traineeship aid under title II, Public Law 911. During the current year, a total of 14 individuals from the State are receiving such aid. Many more nurses applied for traineeships than could be accepted.

A recent study of unmet needs in schools of nursing alone revealed a personnel deficit among faculties of 22.5 percent. In the nursing homes of Maryland, the needs are exceedingly critical for qualified personnel.

The Maryland State Nurses Association will appreciate anything you can do to provide additional appropriations for the traineeship programs.

Sincerely yours,

ANN L. KLINGELHOFER, R. N.,
President.

THE CONNECTICUT STATE NURSES' ASSOCIATION,
Hartford, Conn., May 8, 1958.

Hon. LISTER HILL,
United States Senate,
Washington, D. C.

DEAR SENATOR HILL: We note that the subcommittee on Departments of Labor and Health, Education, and Welfare of the Senate Committee on Appropriations is meeting Monday, May 12, 1958.

In reference to this, the Connecticut State Nurses' Association should like to strongly urge that favorable consideration be given to title I and title II of H. R. 11645.

Connecticut nursing studies have shown that present faculty members of several of our nursing schools are inadequately prepared for teaching. In addition, there is a shortage of qualified supervisory personnel and of professional registered nurses in these hospitals. The public health nurses in

Connecticut rank 39th nationally in a 1957 survey made by the United States Public Health Service in the number of nurses in public health positions who have had at least 1 year of approved preparation in public health nursing.

With our continuously growing population and increasing life span, we must be able to provide the public with the type of nursing care to which they are entitled. This cannot be done without adequately prepared faculties to provide the best in education to our future registered nurses or the supervisory personnel to augment the education offered.

Expanded traineeship programs in nursing are vital to the welfare of our Connecticut citizens. We are concerned that the House of Representatives did not increase the appropriation for these programs in the face of critical needs for health personnel.

The Connecticut State Nurses' Association, speaking for Connecticut nurses, both as practitioners and citizens, strongly urges the appropriation for title I of Public Law 911 be increased to at least $5 million and that the appropriation of title II of Public Law 911 be increased to at least $7 million.

Our citizens deserve the best. We look to your committee to fulfill the responsibility of helping us to provide this.

Sincerely yours,

ELEANOR LUNDBLAD, R. N.,
Executive Secretary.

COPY OF RESOLUTION SUBMITTED BY CONNECTICUT STATE NURSES' ASSOCIATION TO THE AMERICAN NURSES' ASSOCIATION IN SUPPORT OF TITLE I AND TITLE II OF H. R. 11645.

Whereas a study made by the Connecticut State Board of Examiners for Nursing in the fall of 1957 has shown that the present faculty members in several of the schools of nursing in this State are inadequately prepared for teaching, particularly in the clinical areas of medical, surgical, obstetrical, and pediatric nursing; and

Whereas information collected in the fall of 1957 by the committee to study the future needs for nurses in Connecticut, (a subcommittee under the Connecticut Joint Commission for the Improvement of the Care of the Patient) shows a shortage of qualified supervisory personnel in the Connecticut hospitals, and a reported shortage of 21 percent of professional registered nurses in these same hospitals; and

Whereas the schools of nursing in Connecticut cannot increase the present student enrollments to meet the current demand for nurses to fill the beginning positions in professional nursing, or, to meet the estimated shortage in the immediate years ahead (to 1965) without more prepared teachers on the school faculties and more qualified supervisors in the clinical areas of practice; and

Whereas the public health nurses in Connecticut rank 39th nationally in the 1957 survey made by the United States Public Health Service in the number of nurses in public health nursing positions who have had at least 1 year of approved preparation in public health nursing; and, the funds allocated by the Connecticut State Legislature for the biennium 1957–59 enabled the State department of health to assist only a limited number of public health nurses (i. e., 6 partial scholarships for 1957–58) employed in this State for work toward the basic qualifications for public health nursing, or toward the master's degree for qualified supervisory positions in public health nursing, which does not nearly meet the need in this field in this State; and

Whereas many of the members of the Connecticut State Nurses' Association have come to the P. C. and P. S. counselor for information and advice about financial aid to assist them to pursue graduate nurse education on both the bachelor's and the master's level in preparation for teaching, administrative, or supervisory positions in hospitals and public health agencies: Be it

Resolved, That the board of directors of the Connecticut State Nurses' Association strongly recommends the continued appropriation of Federal funds for traineeships for registered professional nurses and for professional public health personnel to be granted under the United States Department of Health, Education, and Welfare.

March 1958.

Senator HILL. Miss Germaine Krettek, American Library Association. Good morning, nice to have you here.

Library Services Act

American Library Association

STATEMENT OF GERMAINE KRETTEK, DIRECTOR, WASHINGTON OFFICE

GRANTS FOR 1959

Miss Krettek. It is nice to be here, Senator Hill.

Mr. Chairman, my name is Germaine Krettek. I am director of the Washington office of the American Library Association, a nonprofit professional association of more than 20,000 members, consisting of librarians, trustees, and friends of libraries interested in the development, extension, and improvement of libraries as essential factors in the educational program of the Nation.

I am extremely grateful to the subcommittee for allowing me to appear before it, so that I may request, on behalf of the American Library Association, that the full amount of $7,500,000 authorized by the Library Services Act for grants be recommended for fiscal 1959.

As you know, the act authorized annually, for a period of 5 years, grants of $7,500,000 on a matching basis to stimulate the States to extend and improve their public library services to the small towns, villages, and farming communities without such services or with inadequate services. This legislation was supported not only by the American Library Association, but by many educational, civic, labor, and farm organizations.

The results of this legislation to date have been tremendous; they promise to be even more so if the small amount authorized, $7,500,000, is appropriated.

Already in the last than 2 years of operation and with appropriations considerably below the authorized amount, the Library Services Act has made a good start toward accomplishing the objectives which its congressional sponsors envisioned for it.

ACCOMPLISHMENTS UNDER ACT

Although there is no fixed pattern for State plans and each State is free to make a plan best suited to its particular needs, these are some of the accomplishments of the act:

1. Forty-nine State and Territorial library extension agencies are strengthening their staffs, their book resources, reference, loan, and consultant services in order to give greater assistance to the rural areas; another Territory is on the point of participating in the program;

2. One hundred and twenty-six county and regional library demonstrations in 37 States are underway, resulting in many economies of operation;

3. Fifty-two bookmobile demonstrations are taking place in 31 States;

4. Twenty-seven groups of libraries in 18 States are cooperating under the State plans to exchange books and other materials and to share book resources;

5. Fifteen projects have already been set up to centralize the cataloging and the preparation of books, and also economize through large scale buying. The tax dollar is thus made to go further and to render greater service.

6. Fourteen branches and State libraries are being developed in 10 States in order to bring books and information to rural people who have had no library available to them.

7. Twenty-five States are improving rural library service through inservice training opportunities.

8. Over 300 rural counties with populations totaling 7,500,000 children and adults are now receiving new or improved service under the program.

9. State funds, although still inadequate for the extension of rural library service, have increased 38 percent since 1956, the date of the passage of the act. The stimulation of the Federal funds has been a potent factor in this progress.

10. In view of the urgency for training scientists, many States have projects involving science and technical books for the youth in the rural areas.

For example, Mr. Roger McDonough, director, division of the State library, archives and history, New Jersey Department of Education, writes:

> All the preparatory work is just now coming to fruition and the actual bookmobile operation at the tricounty library project has begun * * * I think if the Members of the Congress could see the splendid collection of some 2,000 books that were distributed in the first bookmobile load, including first-rate, up-to-date works in physics, chemistry and mathematics, they would be as impressed as I am at the wonderful potential this program holds in terms of the total educational program for our rural citizens.

PROGRAM BEHIND SCHEDULE

These accomplishments are good, but the program is still running behind schedule. Any appropriation of less than $7,500,000 for fiscal 1959 will seriously jeopardize this library program, just getting in full swing, and many worthwhile projects will have to be curtailed or abandoned.

The States in good faith obtained more good funds from their legislatures to meet the sums required to match, they surveyed their needs, they drew up 5-year plans, they determined the geographical areas to be covered each year, they negotiated and made agreements with these areas and they made plans for staffs and equipment to carry out the purposes of the act.

The American Library Association is recommending for fiscal 1959 an appropriation of $7,500,000. The $7,500,000 set in 1946 when the bill was introduced was not a random figure; it did not include any surplus money inserted in anticipation of cuts; and it did not allow for the great inflation which occurred during the past 10 years. The figure was determined after careful study by the American Library Association in 1946 as the absolute minimum to trigger significant educational development.

COOPERATION OF STATES

In the House hearings on the appropriations for fiscal 1959 (p. 152) the Commissioner of Education, upon direct questioning by Mr.

Fogarty, said that the Office of Education had originally requested $7,500,000 for 1959, because the program had a great deal of merit and there was a basis for thinking that the States would come forward to use effectively the full authorization.

There is every reason to believe that the States can use effectively an allocation based on a $7,500,000 appropriation.

Therefore, on behalf of the American Library Association and the many millions who will benefit from this program, I urge that this subcommittee recommend the full authorization of $7,500,000 for grants so that the States which have now laid firm foundations may be enabled to build the structure of good library service for all the people of these United States.

I would like to thank you, Mr. Chairman, and the members of the subcommittee for giving me time to be heard.

Senator HILL. You have brought us a very helpful and informative statement.

Let me ask you this question, please.

Miss KRETTEK. Yes.

STATE OPERATION UNDER ACT

Senator HILL. Of the 48 States, how many of them are now taking full advantage of the act?

Miss KRETTEK. Forty-five States are now taking part in the program. There are three who are not: Indiana, Delaware, and Wyoming.

With Delaware it is a matter of matching funds. The proportion is so great. However, Delaware has introduced legislation in their State legislature and is attempting to get it.

Indiana has not been in the program because the Governor of Indiana is afraid the people of Indiana will be brainwashed by Washington if they come into the program.

Senator HILL. I am glad you did not look at Senator Smith and myself when you said that because we have no ambitions along those lines.

Senator SMITH. Certainly not in Indiana.

Miss KRETTEK. I can assure you that the librarians of Indiana are very much interested in the program, and the Congressmen from Indiana have also been great supporters of the program.

Wyoming had an unfortunate experience. They lost their enabling legislation by one vote.

Senator HILL. There is great hope for Wyoming. In the first place, it is a great State. Another thing, as Senator Smith and I recall, it was the first State, the first government in the world, to grant equal services to women. So I am sure Wyoming will come into the program.

Miss KRETTEK. All of the Territories but Puerto Rico are in the program. In Puerto Rico it has been approved, and it is in the making. It is being considered.

Senator HILL. Any questions, Senator Smith?

Senator SMITH. No questions.

Senator HILL. We certainly appreciate your presence. As I say, you have brought us a fine statement and we are grateful to you.

Miss KRETTEK. Thank you, sir.

LETTER FROM SENATOR MCNAMARA

Senator HILL. I have a letter from Senator McNamara urging this committee to recommend an appropriation of $7,500,000, the full authorization, for 1959 for the library services program. Senator McNamara's letter will be made a part of the record at this point.

(The letter referred to follows:)

UNITED STATES SENATE,
COMMITTEE ON LABOR AND PUBLIC WELFARE,
May 7, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Appropriations, Department of Labor and Health, Education, and Welfare, the Capitol.

DEAR MR. CHAIRMAN: As you know the Library Services Act authorizes an annual appropriation of $7,500,000 for 5 years. Last year the budget estimate was $3 million and $5 million was appropriated. This year the House included a $5 million item for libraries and your subcommittee now has this matter under consideration.

Mrs. Loleta D. Fyan, our State librarian, and a very good one I might add, has called my attention to the progress being made in Michigan under the library services program. The 1957–58 grant to Michigan was $146,547 and in order to get the program underway in our State this year it was necessary to rent and equip new library quarters, recruit a staff of 9 people and to secure and catalog approximately 25,000 new books. Moreover, our State library is currently working on a number of local projects. A pamphlet entitled "A Public Library Development Program for Michigan" issued by our State library, a copy of which is enclosed, will give you some idea of the splendid work being accomplished in our State under the Library Services Act. Undoubtedly similar progress is being made in other States. It is for this reason that I urge your subcommittee to recommend to the Senate Committee on Appropriations that the $5 million item for libraries in the current Labor and Health, Education, and Welfare appropriations bill be increased to $7,500,000 for fiscal 1959 as authorized by the Library Services Act.

All good wishes,
Sincerely,

PAT MCNAMARA,
United States Senator.

STATEMENT OF MRS. CLIFFORD N. JENKINS

Senator HILL. The committee has also received a statement by Mrs. Clifford N. Jenkins, chairman of legislation, National Congress of Parents and Teachers, urging the committee to approve the full amount of the authorization, $7,500,000, for the library services program, as well as increased funds for maternal and child welfare activities. Mrs. Jenkins statement will appear in the record at this point.

(The statement referred to follows:)

STATEMENT BY MRS. CLIFFORD N. JENKINS, CHAIRMAN OF LEGISLATION, NATIONAL CONGRESS OF PARENTS AND TEACHERS, CHICAGO 11, ILL.

The National Congress of Parents and Teachers is a voluntary organization with a membership of 11 million men and women who are taxpayers in every State and Territory of the Union. Our members know that they must balance their own budgets in order to pay their taxes. We have learned that economy, in the best sense of the word, means the wisest use of money; it means putting our money into resources that will provide health, education, equipment for living in an increasingly complex world.

Because we have learned this, we urge, Mr. Chairman, that in spite of the demands for Federal funds for direct defense spending and for antirecession measures, the members of this committee will continue to recognize the value of those services by Federal agencies which are sound and prudent investments in human resources—in the health and vigor of the people, in their education, in their efforts to produce a better climate for the growth of their children.

During the sixty-odd years of its existence, one of the continuing objectives of the National Congress of Parents and Teachers has been to help parents understand their children better, and so better meet their needs. Our members have long benefited from the children's bureau's research into child life. A large percentage of the current crop of college football players, of freshman scientists, of girls majoring in home economics and mathematics, were brought up on the children's bureau's infant care. Through our common interest in the welfare of our children and of all children, our organization has had a close association with the children's bureau, and this, we believe, justifies our concern for the appropriations necessary to carry on the outstanding community services of the bureau.

We urge your full support of the item for $2 million for the research and advisory services of the Bureau itself and of the $42,500,000 for grants to the States: $11 million for child welfare services, $15 million for crippled children's services, and $16,500,000 for maternal and child health services. Obviously this appropriation has to be spread thinner every year. At present more than one-third of our population are under 21. Not all of these children have parents who can give them care, security, a happy home, but they all have the same needs. These grants enable the Federal, the State, and the local governments to work together to meet some of these needs.

We urge your favorable consideration of the budget request for $150,000 to enable the Children's Bureau to work cooperatively with interested organizations on the planning of the 1960 White House Conference on Children and Youth. Our people are increasingly concerned by the mounting difficulties of education, of coping with juvenile delinquency, of evolving a positive national policy of preparing children to meet the problems they will inherit. Because we are Americans, and impatient, and used to solving most of our problems, we have been looking for a quick, efficient master plan, a moral and ethical wonder drug. We are beginning to realize there are none. Our country and our civilization are so complex that a solution to one section's problems may not help the rest of us at all. It is only by identification and analysis of the difficulties we each face that we can arrive at suitable and sometimes separate solutions. The White House Conference provides an opportunity for people from every part of our society and for the representatives of the young people themselves to come together to diagnose their difficulties and cooperatively develop action programs which they can then take back to their local communities. We urge your support of a conference designed to help people help themselves in the most significant undertaking in which they can engage.

We urge your favorable consideration of the full amount authorized annually for the Library Services Act—$7,500,000. This is a clear example of the Federal Government helping people to help themselves. Since the passage of the Library Services Act by the last Congress, 45 States and 4 Territories have approved plans for the extension and development of public library services to rural areas, and can match Federal funds for the full appropriation on a 2-year basis. State appropriations for library service to rural areas have increased 38 percent.

In these States they have added professional libraries to extension agency staffs. They are organizing county and 2-county libraries, to cut cataloging and processing costs by consolidation. They have added 70 bookmobiles, to get the books out into the country, to the people. Ninety more bookmobiles have been ordered.

They know that this is a 5-year program, and they are trying to do the job in 5 years. But they cannot if their funds are cut. For one example, orders for some of those bookmobiles will have to be canceled, if the 1959 appropriation falls below the current level. And whenever this program is curtailed, the intent of the Congress in passing the Library Services Act is not met.

Senator HILL. Mr. Paul Jones, chairman of the Navajo Tribal Council.

Indian Health Activities

Navajo Tribal Council, Windowrock, Ariz.

STATEMENT OF PAUL JONES, CHAIRMAN

MEDICAL CARE FOR INDIANS

Mr. Jones. In my telegram of February 18, 1958, to a number of the Members of Congress, of which some are present, I expressed grave concern about the future progress of medical care for my people living on the Navajo Indian Reservation.

During the latter part of February 1958, Mr. Dillon Platero, a fellow member of the Navajo Tribal Council, came to Washington and discussed with some of you our medical care problems along with problems of education for our people.

FUNDS FOR INDIAN HEALTH PROGRAM

From information I have been able to gather, the Division of Indian Health requested $45 million for fiscal year 1959. The Bureau of the Budget cut this request by $4,775,000 and the House of Representatives has already passed the appropriations bill at this figure.

The Division of Indian Health is currently operating with a budget of $40,100,000. Of this current budget, a little over $6 million are being spent to operate 5 hospitals and 7 health centers on the Navajo Reservation, a school infirmary at Brigham City, Utah, where some 2,000 Navajo children are attending school, and for contractual services in several non-Federal hospitals and institutions.

The meager increase of $125,000 proposed for all Indian health activities in the United States and Alaska, to me means that the operation of the health program on the Navajo Indian Reservation will be limited to its current status. Or, it may even be cut back due to the continuing advance in costs of operation.

SURVEY ON INDIAN HEALTH

The Committee on Appropriations of the House of Representatives, 84th Congress, 1st session, in its report on the bill making the first appropriation to the Public Health Service for health services to Indians, asked the Public Health Service to make a comprehensive survey of the Indian health problem to determine the need and the measures necessary to bring Indian health to an acceptable level.

On February 11, 1957, the Secretary of Health, Education, and Welfare transmitted the Surgeon General's survey report titled, "Health Services for the American Indian" to the chairman, Committee on Appropriations, House of Representatives.

This survey was completed with the assistance of several Federal agencies, tribal Indian organizations, plus many consultants from universities and medical associations.

It is a lengthy but most comprehensive report of appalling health conditions among Indian groups. It also makes sensible recommendations for bringing Indian health standards to an acceptable level.

Briefly summarizing the report it states that, the annual operating cost of the full program to be developed in from 5 to 10 years, including

both direct and contract or other indirect services, is estimated at a total of 60 to 65 million dollars a year, including $15 million for Alaska. Capital costs for hospitals, clinics, and staff housing are estimated at $39 million for the continental United States and $4 million for Alaska, and assistance for the construction of sanitary facilities at $24 million for the continental United States and $5 million for Alaska.

HOUSE REPORT, 84TH CONGRESS

The Committee on Appropriations of the House of Representatives, 84th Congress, 1st session, had knowledge of the appalling health conditions among Indians, for, at the time it made its report on the bill making the first appropriation to United States Public Health Service, it included the following statement which is an excerpt from its report:

> The health facilities are either nonexistent in some areas, or for the most part, obsolescent and in need of repair; personnel housing is lacking or inadequate; and workloads have been such as to test the patience and endurance of professional staff. This all points to a gross lack of resources equal to the present load of sickness and accumulated neglect. Difficult and severe as the problem may be, it can and must be solved, but it cannot be done with timidity.

So far as I am concerned, every word of this statement is true, yet we are faced with the possibility come July 1 of having the gains made in improving health conditions, come to an abrupt halt.

ACCEPTANCE OF MODERN MEDICINE

During the past 3 years that I have been chairman of the Navajo Tribal Council, many petitions for health services to be furnished by the Public Health Service have come to me from various groups in isolated areas of the reservation. Some of these petitions have been made in written form signed by large numbers of members of communities and many have been verbal, wherever group meetings have been held and where I, or another member of the Navajo Tribal Council, have been in attendance. The Navajo Indians are surely and rapidly accepting the practices of modern medicine.

A good example that my people are accepting practices of modern medicine is borne out by the fact that two of the native medicine men of my tribe consented to enter the Oshrin Sanatorium in Tucson for the treatment of tuberculosis. Oshrin is one of our contract facilities far removed from the Navajo Reservation. On my last visit to this facility, I made it a point to discuss with these men, reasons for their accepting hospitalization and treatment from the ways of the white man.

They were very frank with me in making their replies, even considering the fact that they knew they were talking to the man occupying the highset position in their tribal governing body. Summarizing my discussions with them, it boils down to two main factors:

1. Navajos in the community where each of these men lived had attended health clinics conducted by Public Health Service doctors and nurses. Many of these people who were sick had ventured so far as to be examined by these doctors and nurses, and subsequently received treatment for their ailments. Many also consented to be immunized against the more common communicable diseases.

2. These medicine men were fast going out of business due to the fact that their patients had had a taste of modern medicine, and liked

it. So much so, that they themselves were convinced to the point that they should give it a try, since treatment of themselves had failed.

As I've stated before, these two medicine men are now in a white man's hopsital receiving the white man's treatment for tuberculosis.

Senator HILL. That is a very surprising statement. Do you know of any instances in the past where these medicine men have been in the white hospitals?

Mr. JONES. Yes, several in the past.

The native Navajo medicine man, who, for many years past, practically dictated the everyday activities of Indians living in his area, is gradually losing his influence, especially in the treatment of the sick.

I'm sure a great majority of my people are convinced that the Public Health Service can more effectively cure their ills than the native medicine man. That is the influence of the hospitals and the doctors.

As a result, more and more Indians are seeking medical care services in our Public Health Service hospitals, health centers, and isolated clinics.

FUNDS NECESSARY TO MEET DEMANDS

In order for the Public Health Service to meet the demands and to be able to cope with this trend, it is absolutely necessary that a much greater increase of funds be appropriated to employ more doctors, nurses, and other health workers in order to adequately operate present hospitals and health centers; to build more clinics to provide outpatient services to all segments of our population; to purchase necessary drugs, food, other medical supplies and modern equipment; and to build adequate quarters to replace present uninhabitable housing, and additional quarters to house an increased staff.

I have a document here which was prepared by Dr. I. W. Steele, Division of Indian Health, Window Rock, and which relates immediate needs for the Navajo Reservation. These needs are over and above his presently operating budget to operate present facilities and without giving consideration to expanding programs in areas of the reservation where health services and meager or nonexistent.

He has listed 92 additional positions as being required throughout the reservation, the salary costs and operating expenses of which, on a gross annual basis, will approximate $441,833. Of course, a majority of these positions cannot be filled during the full year of fiscal year 1959 until additional housing has been constructed.

He shows that 66 housing units need to be constructed early in fiscal year 1959 to house the above staff. This is not taking into consideration that many of the presently employed professional personnel live in substandard housing, and a large number of ancillary workers are required to live in shacks which are, in some cases, as bad or worse than slum housing in city areas. The cost estimated to build these housing units is given as $1,320,000.

NEW HOSPITALS UNDERWAY

At this time, I wish to state that I have recently learned that work is to start in the construction of the new Shiprock hospital, and that plans would soon be completed so that construction of a new hospital in Gallup will get underway.

On behalf of the Navajo Indians, we are most grateful that these facilities will be built, and we wish to convey our message of thanks to every Member of the Congress responsible for the realization of these projects.

However, my guess is that it will take 2 to 3 years to complete, and put into operation, the first of these 2 hospital projects. The urgent need for greater medical service to relieve human suffering among Navajo Indians is today.

FIELD HEALTH CENTERS

When I left the reservation, work had started in the construction of two field health center buildings on the reservation at Tohatchi, in New Mexico, and at Kayenta, in Arizona. These clinics, if staffed adequately, will give some relief to outpatient care and referral of patients needing hospitalization to hospitals.

Dr. Leroy Burney, Surgeon General of the United States Public Health Service, visited our reservation in February of this year. Along with Dr. Henry W. Kassel, area medical officer in charge, Albuquerque area, and Dr. Ivan W. Steele, assistant area medical officer in charge, we made a tour of inspection of the health facilities on the Navajo Reservation and discussed problems with various staff members.

WORKLOADS

It was evident that the workloads of both inpatients and outpatients were on the increase. Already overworked staff members were becoming discouraged, as they had already learned that assurances could not be given them that additional help would be forthcoming at the beginning of the next fiscal year.

In fiscal year 1955, there were 6,620 admissions; 8,716 in fiscal year 1957. There has been an increase of 2,096 admissions during the 2-year period.

Although I do not have the data, I'm sure there will be a large increase for the current fiscal year. Outpatient visits, during this same 2-year period, have increased 52 percent, and there are indications that this load will continue to increase. The increase in ratio of staff members to patients has not kept pace with this upward trend.

INCIDENCE OF DISEASE

The most prevalent diseases that we are faced with are influenza and pneumonia, diarrhea and enteritis, tuberculosis in all forms, and measles. Many other diseases affect my people, which I cannot enumerate. I have heard many times from friends of mine who are doctors that, if a medical doctor is sincere and wants to get a well-rounded experience in the practice of medicine, the Navajo Indian Reservation is the place to go to gain this experience.

Some of our hospital beds are filled with chronic patients who no longer need intensive treatment. These few beds are sorely needed for the acutely ill. This problem was brought to our attention by Dr. Henry W. Kassel, area medical officer in charge, who is making every effort to locate a suitable non-Federal facility to contract with for the care of these patients, providing funds are available.

IMPROVEMENT UNDER PUBLIC HEALTH SERVICE

In 1954, the 83d Congress, through Public Law 568, designated the United States Public Health Service as the agency to administer an expanded and improved Indian health program. Thus far, we have experienced an expanding program; the limited medical care we are receiving is very good, and the relationship of our Navajo Tribal Council members with that of the entire staff of the Division of Indian Health is most agreeable. Our health committee of five tribal council members is constantly working out problems with the administrators of our health program.

In spite of these favorable factors, there is yet much to be accomplished to meet the total health requirements of my people. I trust that I have made clear some of the health problems and needs that face the Navajo Indians and the Division of Indian Health, and that you will give favorable consideration to appropriating $45 million for fiscal year 1959 to further expand health services to Indians, which includes our Navajo people.

Senator HILL. I might say that, when the Surgeon General of the Public Health Service was before us a few days ago, he spoke of the splendid cooperation that the Public Health Service is getting from your people. He and others of the Public Health Service emphasize the needs very much, as you emphasized them this morning.

Mr. JONES. I happen to have the pleasure of having guided him through the reservation.

Senator HILL. He spoke of his visit out there last February.

Mr. JONES. Yes; it was in February.

Senator HILL. Any questions, Senator Smith?

Senator SMITH. No.

Senator HILL. Thank you very much, Mr. Jones.

COMMITTEE ON HEALTH, NAVAJO TRIBAL COUNCIL

STATEMENT OF MRS. ANNIE D. WAUNEKA, CHAIRMAN

BACKGROUND OF WITNESS

Mrs. WAUNEKA. As chairman of the health committee of the Navajo Tribal Council, and having worked closely for the past 7 years with the health area and local medical officers in charge of health facilities, and even before the transfer of health responsibilities to the Public Health Service, I have acquired an intimate knowledge of many of the health problems of the Navajo Indians. There have been improvements, but the total health needs of my people are far from being adequate.

I have made several visits to each of our hospitals on the reservation and each of the tuberculosis contract hospitals. During these visits, I have discussed problems with doctors, nurses, Indian attendants, and last, but most important, Navajo patients confined in these hospitals.

SPECIFIC NEEDS

To get down to specifics of our problems, I wish to relate the following:

1. There are 80 known and untreated mastoidectomy cases found in three-eights of the reservation area. If a concerted survey were possible, this figure would easily reach 300, at least.

2. There are at least 200 known tonsillectomy cases which have not been taken care of due to lack of personnel and facilities.

3. Not one eye specialist is employed on the reservation, nor is there an ear, nose, and throat specialist. We should have at least three for each of these specialties. We know that many, many of our people need the services of these specialists. We have knowledge that many of our Navajo people are going blind and becoming deaf due to lack of these services.

4. There are 145 known orthopedic cases still to be taken care of. A total of 1,115 cases have received treatment during the period 1949 to the present date. Many of these cases have been rehabilitated to become productive citizens.

There are still many adults, who, if treated and rehabilitated, would not continue to be a burden on the Welfare Branch of the Bureau of Indian Affairs, as well as the Navajo Tribe.

5. Elective surgery is not being performed in any of the Public Health Service hospitals. Emergency surgery only is being done in 3 of our 5 hospitals. This situation exists, mainly, due to lack of nursing personnel. Sometimes lack of beds is a factor.

DISTANCE FACTOR

6. A majority of my people live many miles from hospitals and health clinics. Besides traveling great distances, many of our sick people are required to sit and wait long hours in waiting rooms before their turn is reached to see a doctor. There have been instances where some patients have been asked to come back the following day due to the inability of the medical staff to examine and treat such large groups.

As a result, Navajos become disgusted and discouraged, which makes them reluctant to ever return to the hospital until their sickness has reached the point where doctors are unable to help them. They either become chronic cases or die.

INCREASE IN OUTPATIENTS

7. The outpatient department of the Fort Defiance hospital will no longer accommodate the large number of patients that come in daily. There is not enough examination and treatment space, the waiting-room space is overcrowded continually, and there are not enough doctors to handle the daily patient workload. The cost of this expansion is estimated to be $170,000, and I am asking that additional money be appropriated to complete this expansion.

8. Every year, larger groups of Navajos seek seasonal employment on farms and ranches in Colorado, Utah, Idaho, California, and southern Arizona. These people leave the reservation without first getting physical examinations to determine whether or not they are free of communicable diseases. The Division of Indian Health wants to, but cannot, render this service, due to lack of doctors and technicians. As a result, many create health problems among communities for State health departments, private hospitals and practitioners, and State welfare agencies.

An attempt is being made by the Division of Indian Health to give physical examinations to Navajo Indian families who are scheduled to be relocated off the reservation as arranged for by the Branch of Relocation of the Bureau of Indian Affairs. There is much delay, which occasionally causes families to change their minds about moving.

9. Facilities on the reservation are nonexistent to handle psychiatric patients until they can be committed to State hospitals. It is necessary to confine these patients in local jails, treating them as criminals. I have spent much time asking Government and private doctors what their ideas were as to the number of doctors and dentists we should employ on the reservation, as compared with the general populations of the United States.

RATIO OF DOCTORS

The general concensus of opinion was that we should have 1 doctor for every 1,000 Navajos. With our population of 30,000 Navajos, our present ratio is 1 for every 3,000 Navajos.

The ratio of our dentists is 1 for every 8,000 Navajos, while in the general population it is 1 per 1,900.

These figures bear out the fact that we need many more doctors, dentists, nurses, and other health workers, if you expect us to discontinue being a health menace to other people in the United States. Neither can we feel free from fear within the boundaries of our reservation without adequate health services being made available to us.

DEATH RATE

Navajo health statistics show that in fiscal year 1956 more than twice as many Navajo babies died before reaching the age of 1 year than did in the United States general population.

In calendar year 1957, 4 times as many Navajos died from influenza and pneumonia as did in the United States general population; twice as many from accidents, and 13 times as many from dysentery, gastritis, enteritis, and diarrhea.

TRIBAL EXPENDITURES FOR HEALTH ASSISTANCE

The Navajo Tribe has budgeted and partly spent this fiscal year the sum of $119,146 as direct assistance to the health needs of our people.

Of this amount, $22,500 was budgeted to assist needy adult Navajo Indians in the purchase of eyeglasses, hearing aids, dental partials and appliances, artificial limbs, orthopedic braces, wheelchairs, and so forth. This particular budget item was overspent during the first half of this fiscal year to the amount of $57,146.

Other budgeted items include definite amounts earmarked to assist in health education; to assist the Cornell University Medical School with its research work and to operate its clinic at Many Farms; purchase of eyeglasses for Navajo schoolchildren, which was budgeted separately from the Navajo adult eyeglass program; purchase of occupational therapy materials for use in Public Health Service tuberculosis sanitoriums in Fort Defiance and Albuquerque for Navajo Indians; purchase of rehabilitation equipment used by convalescing crippled children hospitalized in the Winslow and Crownpoint Public Health Service hospitals, and other miscellaneous medical-care purposes.

The tribe budgeted and is spending $1,959,180 to indirectly assist health welfare of Navajo Indians. The most notable of these budget items is the development of 50 wells and springs for domestic use water supply; $550,000 were allocated to carry out this program.

Other items include construction of new and repair of existing chapter houses; purchase of materials to construct low-cost housing by needy families, the plans of which were developed by the Sanitation Branch of the Division of Indian Health; higher education scholarships; purchase of clothing for indigent children attending boarding schools, etc.

So, you can see we are doing everything possible to help ourselves. The costs to operate hospitals and clinics are tremendous, but they are very important to us. We have hospitals fairly well equipped which could be operated at capacities if only we had enough professional people to work in them.

METHOD OF DETERMINING APPROPRIATION

It is my understanding that the future year's allotment of money is based on the previous year's patient workload. How do you expect patient workloads to increase when there isn't enough staff to take care of the present load? Very little, if any, progress can be made on this basis, and our people will continue to suffer needlessly.

I, too, have a copy of Dr. Steele's progress and needs report and I fully agree with the statement that we should fully staff our existing hospitals and health centers; that funds should first be immediately made available to build good houses for employees to live in.

I understand that within the next 2 to 5 years, new hospitals will be built at Shiprock and Gallup for Navajos. I hope the Congress of the United States will appropriate enough money to staff and operate these units so that Navajo patients will get good care; that these units can operate at capacities, and that staff members will not be required to work long hours in excess of their regular tours of duty. This causes many of our personnel to become dissatisfied and leave.

AMOUNT REQUESTED

I am appealing to you and it is most urgent that you appropriate $45 million for Indian Health Services for fiscal year 1959.

Thank you for allowing me to appear before you.

Senator HILL. I might say, as Mr. Jones said, the United States Public Health Service requested the sum of $45 million.

Without objection, we will place in the record following your remarks, Mrs. Wauneka, the letter of Dr. Steele to which you referred in part of your statement.

(The information referred to follows:)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
PUBLIC HEALTH SERVICE,
WINDOW ROCK SUBAREA OFFICE,
Window Rock, Ariz., May 5, 1958.

To Whom It May Concern:

On May 1, 1958, I received a copy of a letter written by Mrs. Helen L. Peterson, executive director, National Congress of American Indians. This letter was written to several influential organizations and people interested in the overall welfare of tribes and groups of Indians. It asked that these organizations and people solicit information from me as to progress of the health program and the areas of greatest need to operate an adequate health program on the Navajo Indian Reservation.

During the first 2 calendar years the Division of Indian Health has operated under the United States Public Health Service, admissions to hospitals have increased 31 percent; outpatient treatments have increased 52 percent. This increased service was performed in the five hospitals which are operated on the reservation.

In addition to increased service in PHS Indian hospitals, contracts were entered into for general medical-care hospitalization services for Navajo Indians with non-Federal hospitals located in Farmington, Gallup, and Albuquerque, in New Mexico; Cortez, in Colorado; and Flagstaff, in Arizona. Contracts were also entered into with physicians at these locations. It has been necessary to refer patients to these facilities not only for specialized care but also because of lack of sufficient personnel to care for the patients and hospital beds. Also, there have been occasions when no other patient could be admitted to our facilities, nor to any of the contract hospitals, because of the unavailability of beds.

Since July 1, 1955, we have increased contractual flying services from 1 contractor to 5. Every attempt is being made to move the acutely ill patients to hospitals as rapidly as possible to insure early treatment and to possibly avoid loss of life.

The staff of medical doctors in our hospitals has been increased from 15 to 20 since July 1, 1955. There has been a complete turnover of physicians since that date. We have been fortunate to get younger and better-qualified physicians. A majority of them are Reserve Corps commissioned officers, and, although their maximum tenure of assignments are 2 years, they are energetic and extremely interested in the type of care they give their patients.

The staff of field health service physicians has been increased from 3 to 10. This increased staff is providing preventive medical care services in 4 large field health service areas, visiting improvised clinic stations in BIA schools, trading posts, and dilapidated Navajo Indian community buildings. Although the primary function of this staff is to prevent disease outbreaks, each physician examines and treats from 30 to 100 patients daily.

A contract was consummated with the Cornell University Medical School to establish a research project at Many Farms, Ariz. The primary function of this project is to determine the feasibility of eradicating tuberculosis through a chemotherapy program by the treatment of patients in homes with a newly developed drug in pill form. Shortly after the establishment of this clinic station, the doctors and nurses learned that it was necessary to render outpatient treatments for all types of diseases before the confidence of Indians could be gained to carry out their chemotherapy program. This station is located is one of the most isolated areas of the Navajo Reservation, and it has developed into a very active all-purpose outpatient clinic. Many Indians are treated in their hogans who normally would not travel long distances to clinic stations or hospitals.

In addition to increasing the number of physicians both in hospitals and field health services, there has been an appreciable increase in the number of dentists, public health nurses, sanitary engineers, sanitarians, and sanitation aids.

A new program of health education was instituted through employment of two staff members qualified in health education. A field staff of nine community workers and four aides were employed to carry out the program. Five of the

nine community workers selected for appointment are Indians with college degrees. The four aides are all Indians. Prior to appointment of this staff, they all had had previous teaching experience working among Indian groups. An intensive orientation course in health education methods was given these workers and aides before placing them in their respective field stations. Through the good work of this staff, good health practices are evident in home of Navajo Indians. There is evidence that this service is responsible for increased patient loads in our hospitals and field clinics.

The increased sanitation staff has made much progress in getting individual Indians and groups of Indians to develop safe water supply facilities; to participate in vector control programs by screening windows and doors and spraying their hogans with insecticides; and to construct and use privies. This service responded to a request from the Navajo Tribal Council to develop plans for the construction of a good low-cost housing unit which could be built within the financial means of a majority of Navajo Indian families. A model house was constructed recently, demonstrated before the council in session, and accepted by that governing body. Subsequently, a life-size house has been constructed and tested for warmth and livability. The cost of materials to build this house is less than $500. Labor to construct the unit is to be furnished by individual families. We are happy to report that many requests are coming into our sanitation offices by Navajos seeking technical assistance to build homes from these plans.

If I may relate my personal experience as a Regular Corps commissioned officer of the United States Public Health Service for the past 29 years, I feel that much improvement has been made during the past 22 months. In July, 1956, I was transferred to Fort Defiance to assume responsibility for operation of the largest hospital on the reservation. Organization of the many services within the hospital was in a chaotic state, the warehouse of drug and general medical supply items was in a deplorable condition as no records were available of quantities on hand and storage of items was haphazardly made. I hope I am not being too immodest but through my long experience in operating hospitals and with the cooperation of our staff of doctors, dentists, nurses, and administrative personnel, we were able to make great improvement in the organization and operation of the hospital. We were successful in employing a pharmacy officer to organize and maintain an adequate supply of drugs, additional personnel to provide current medical and statistical records, and a few additional administrative personnel to properly arrange warehousing, to maintain control records, and to assure a adequate supply of general medical supplies at all times.

As a result of our efforts and hard work, the PHS Indian hospital in Fort Defiance, Ariz., became accredited in June 1957, by the Joint Commission on Accreditation of Hospitals of the United States and Canada. The representative of this organization observed closely the type of outpatient and inpatient care we were giving our patients, inspected medical records, clinical and X-ray procedures and records, and made many other inspections of accreditation requirements.

One of our most notable progress items, in addition to providing better and greater health-care services, is our improved relationship with the Navaho Tribe of Indians.

We are working closely with the tribe through a health committee appointed by the Navajo Tribal Council. This committee is headed by a very intelligent and able woman, Mrs. Annie Wauneka. Through joint meetings of our staff members with the Navajo health committee, we have discussed and eliminated many health problems and complaints. Members of this committee have traveled long distances to problem areas to discuss and explain in the Navajo language why certain procedures are carried out in reservation as well as contract hospitals to provide the best care possible. The Navajo people are kept better informed on health matters. For example, they learn about diseases, one of which is tuberculosis. They learn that they should be in a hospital when they have this disease, and that they should not leave until attending physicians discharge them. This committee has also been responsible for getting many patients who left against medical advice to return to sanatoriums for further treatment. This has been accomplished through visits with our public-health nurses to individuals at home, and through weekly talks in the Navajo language over radio station KGAK, in Gallup.

There has been progress in many other health activities, too numerous to mention. There are also many intangible improvements.

This office has received information from our area office that the overall fund appropriation for the Division of Indian Health for fiscal year 1959 will be a slight increase of $125,000—from $40,100,000 to $40,225,000. This increase will provide for increased wage-board salaries and the annualization of contributions to the civil-service employees' retirement fund. Every attempt will be made to hold the present gains.

Our areas of greatest need are prevalent throughout all Division of Indian Health facilities operating on the reservation. However, emphasis and priority of needs would be to provide adequate staffs, adequate housing for these staffs, and adequate funds to procure contractual utilities, drugs, and supplies, for each of our five hospitals.

In at least 2 of our hosiptals, a total of at least 20 additional beds could be put into use. The three other hospitals are attempting to operate at and above capacity inpatient loads at certain times with wholly inadequate staffs. It is impossible to operate these hospitals at or near capacity on a continuing basis, since it demoralizes medical and nursing staff members to put in long hours of hard work, knowing that their professional skills are spread too thinly and knowing that each patient is not actually receiving the best of medical care.

It is difficult to understand, after a hospital is built, why funds are not made available to staff and operate it to the maximum of service for which it was intended. It is impossible to perform elective surgery in any of our hospitals. Surgery is being performed on an emergency basis only, due to lack of personnel and beds. There have been instances when a patient has been examined in an outpatient department and denied admission for lack of personnel and a bed to provide him with care. Such cases were treated as outpatients, given drugs to take at home, and ordered to bed after they got there.

Upon receipt of the copy of the letter mentioned in the first paragraph, I immediately telephoned each of our medical officers in charge, requesting they provide me with data as to their greatest needs in fiscal year 1959 by priority. They were cautioned not to estimate their needs on a plush basis, but to list bare minimums to provide for a minimum of service. It was the consensus of opinion, and I agree, that our greatest needs are in our hospital services section.

We have compiled, in brief, summary form, personnel requirements in addition to current hospital staffs, as follows:

Type of position	Number	Total gross annual salary
Medical officers	5	$37,500
Registered nurses	19	107,785
Trained practical nurses	4	12,700
Nursing assistants	6	17,760
Medical and X-ray laboratory technicians	4	13,660
Medical records clerks	2	6,830
Administrative clerks	6	18,050
Pharmacy helpers	2	6,822
Building repair and maintenance men	4	18,500
Chauffeur (ambulance)	1	3,538
Charwoman	1	3,264
Janitors	6	20,466
Kitchen helpers	3	9,672
Total requirement	63	276,547
Housing requirements to house above increased staff:		
Efficiency apartments, 2- and 3-bedroom units	42	840,000
Other operating expenses		20,000
Grand total, additional hospital services requirements, fiscal year 1959		1,136,547

Salary requirements have been computed on a gross annual basis without considering lapses in filling positions, quarters deductions, contribution to retirement funds, etc.

It is essential that funds be allowed for early construction of housing before a majority of the positions can be filled, to provide relief to current staffs. Commercial or other rental housing is nonexistent at four of our hospital locations. A majority of hospital employees rotate their tours of duty, serving on the 3 varied 8-hour shifts. Too, most of them are subject to call for emergency overtime work, which makes it essential for them to live on the premises of hospitals.

Our other area of greatest need is in the field-health-services program. Requirement estimates were not considered for field health facilities which will

be constructed during fiscal year 1959. We are interested only in staffing presently operating facilities to handle current patientloads. In summary, requirements are as follows:

Type of position	Number	Total gross annual salary
Field medical officers	4	$30,000
Field dental officers	2	15,000
Sanitarian aids	3	9,525
Public-health nurses	7	38,080
Trained practical nurses	5	9,525
Chauffeur-interpreters	7	24,766
Medical social worker	1	6,390
Total	29	133,286
Additional housing requirements, above staff:		
Efficiency apartments, 2- and 3-bedroom houses	24	480,000
Other operating expense requirements, additional		12,000
Total field health-service requirements		625,288

As stated in hospital service requirements, it is essential that early construction of housing be made before a majority of the field health positions can be filled. Some of the housing would be located in the more isolated regions of the reservation.

The total sum of $1,761,833 for a full year's operation is a conservative estimate which will permit our health program to provide as near full patient care coverage as possible during fiscal year 1959. Of this amount, the cost of construction of housing estimated to be $1,320,000 would not be a recurring expense.

Sincerely yours,

I. W. STEELE, M. D.,
Assistant Area Medical Officer in Charge.

Senator HILL. Senator Smith, do you have any questions?

Senator SMITH. Not any questions.

Senator HILL. You have come a long way to be here today. We appreciate it very much. We want to thank you. You have brought us most informative statements, some facts, told us some things that had not been brought out before. You have made a splendid presentation and we want to thank you and express our appreciation.

Senator HILL. Mrs. Helen L. Peterson. We are glad to have you, and we will now be glad to have you proceed in your own way.

NATIONAL CONGRESS OF AMERICAN INDIANS, WASHINGTON, D. C.

STATEMENT OF MRS. HELEN L. PETERSON, EXECUTIVE DIRECTOR

ORGANIZATION MEMBERSHIP

Mrs. PETERSON. Mr. Chairman and Senator Smith, I am Mrs. Helen L. Peterson, enrolled member of the Oglala Sioux Tribe, Pine Ridge Reservation, South Dakota, and executive director of the National Congress of American Indians with headquarters at 530 Dupont Circle Building, Washington, D. C.

This organization is the only national American Indian organization with voting membership limited to legally recognized Indians, and with membership officially by tribal groups as well as by individuals. Out of about 100 tribal organizations with significant land holdings and/or populations, 65 are member tribes of the National Congress of American Indians with practically the remainder of them cooperating in activities and sharing in decisions in one way or another.

We know that the Congress asked the United States Public Health Service to make a complete survey and report of Indian health needs which it did only a couple of years ago. Your committee, therefore, has ready access to accurate information as to the nature and extent of health needs of American Indians and other natives in the United States and Alaska. Also, I know that many witnesses are here today and some have come very long distances to be heard by your committee, therefore I shall make my statement brief.

CHARTS OF HEALTH CONDITIONS

With your permission, and concerning need, I should like to present to your committee just two charts made from data contained in USPHS reports. It is hoped these will serve to summarize the serious health conditions prevailing yet today among those who were the first Americans.

Progress in medical practice together with research and public health measures have made the United States among the healthiest nations in the world, but the Indians and natives have not shared proportionately in this progress. For this reason, we petition, most earnestly, your committee of the Senate to raise the 1959 appropriation for the Division of Indian Health to at least $45 million.

It is our understanding from reading the House hearings that the Division initially estimated its minimum budget needs at this figure. Since the responsibility for Indian health was transferred to USPHS 3 years ago, Congress saw fit to appropriate increasing sums of money for the fiscal years 1956 and 1957 and for this we are very grateful to the Congress.

MANDATORY SALARY INCREASES

However, what appeared to be a modest increase for fiscal 1958 actually went into mandatory salary increases and retirement benefits and hardly represented an increase in services.

The $40,225,000 requested and passed by the House for fiscal 1959 is practically no increase at all over 1958 and will actually mean a cutback in services that are just beginning to pay dividends in better health and more productivity.

With the increased appropriations by Congress, the Division of Indian Health has made measurable progress in reducing incidence of disease and abnormal mortality rates. Not so easily measurable, but vitally important, the Division has shown disposition to try to work with the Indian people themselves, to make them partners in the staggering job of bringing Indian health up to the levels of the general population.

True, there is room for further improvement in this area, but you gentlemen of the Congress—and perhaps we in a small way—can hold the Division responsible for further improvements in attitude and service.

However, the Division of Indian Health—even with complete cooperation of the Indians themselves—cannot accomplish this task

without congressional appropriations. They and we deeply appreciate the need for strict economy in Federal expenditures.

On the part of the Indians, I doubt there is a tribe that is not spending its own tribal funds to do all that it can to assume a share of the cost.

Increasingly, our organization is placing emphasis on education concerning health matters and on volunteer work by Indians to improve Indian health always in cooperation with the professional people responsible, of course.

Privately financed health committees and programs, such as the one at Crownpoint, N. Mex., also are expressions of willingness and concern to bring private funds and effort to bear on supplementing the funds we are requesting of the Congress.

PLEA FOR ORIGINAL FUNDS REQUEST

Mr. Chairman, and members of the committee, Indian and native health needs have been so long neglected, their problems are so serious, the people are so scattered and so disadvantaged as to education, economic status, housing, and communication, and the consequences of continuing inadequate professional Federal programs are so serious—locally, nationally, and even internationally—that we plead with you here today to report favorably and to work vigorously for an appropriation no less than the $45 million initially asked by the Division of Indian Health.

You could not do otherwise if you could see and hear the people who need these services. But the conditions that contribute to their bad health problems are the same conditions that keep them unaware of how effectively to register their needs and unable to come before you.

Only last week, the distinguished chief of the Eastern Band of Cherokees in North Carolina said that sometimes there is even fear of insufficient funds to feed Indian patients in the hospital; and from every sector of the country we get reports of deaths and suffering and untreated illnesses or accidents because "there aren't enough doctors and dentists, enough nurses, enough personnel."

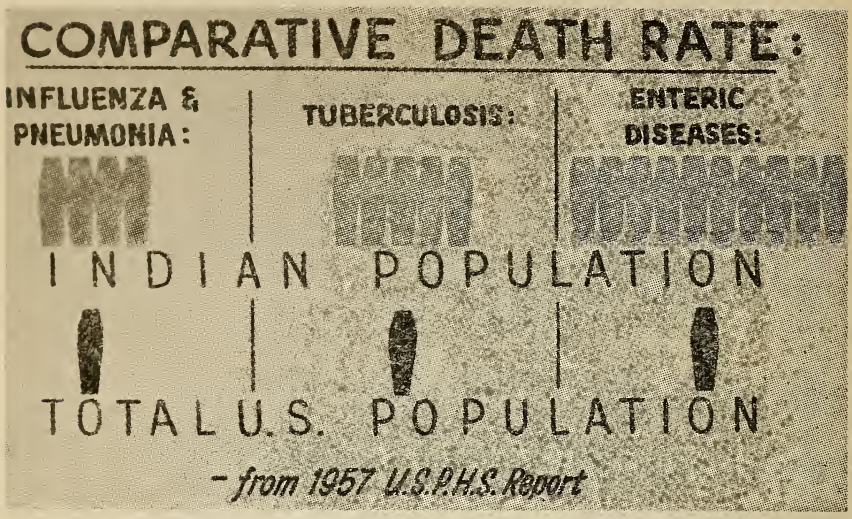
Since Mr. Jones, Chairman of the Navajo Tribe is presenting more of the general information—and full data from USPHS is available—and since Mrs. Annie Wauneka, Navajo tribal health chairman, is presenting forcefully some specific examples of health needs, I shall conclude my testimony by expressing our appreciation to your committee for the opportunity to appear and for your courtesy, and by laying before you the resolutions that were unanimously passed by official representatives of more than 80 tribes present at our last annual convention in Oklahoma last fall.

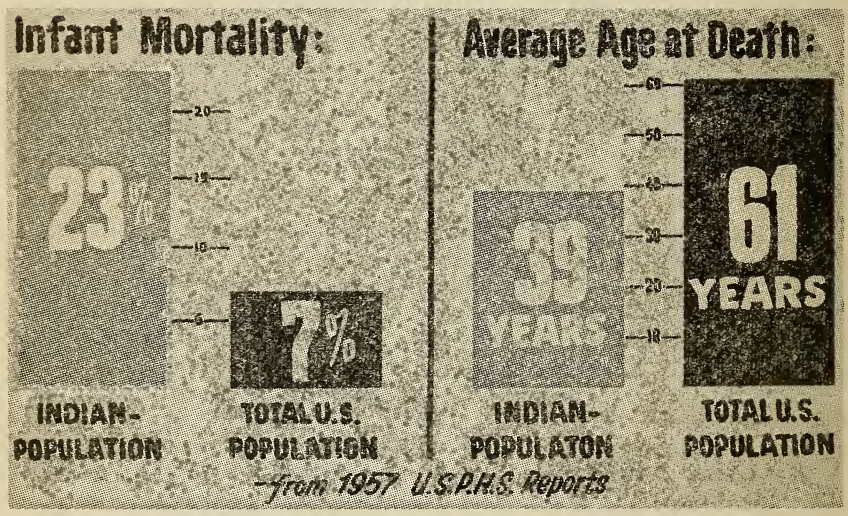
Senator HILL. Will you leave these charts with us because they are very impressive?

Mrs. PETERSON. They are also reproduced in these small charts.

Senator HILL. We want them so they can go in the record.

(The charts referred to follow:)





NATIONAL CONGRESS OF AMERICAN INDIANS, RESOLUTIONS, 14TH ANNUAL CONVENTION, OCTOBER 28–NOVEMBER 1, 1957, CLAREMORE, OKLA.

RESOLUTION NO. 1—STATEMENT OF POLICY

Be it resolved by the National Congress of American Indians in convention assembled October 28 to November 1, 1957, at Claremore, Okla., That:

Whereas by far the great majority of the Indians of the United States continue to exist in poverty and under economic circumstances which offer little or no opportunities for advancement; and

Whereas the Indian health is deplorable in comparison to the Nation as a whole as revealed in countless surveys; and

Whereas Indian education lags far behind the national average; and

Whereas the Congress of the United States in House Concurrent Resolution 108 (83d Cong.) used certain language which has been interpreted to require the ter-

mination of Federal supervision and assistance to the Indians as rapidly as possible; and

Whereas we are well aware of the earnest desire of the Congress of the United States and of the executive branch of the Government to bring about the honorable discharge of the responsibilities and obligations assumed by the United States, and we, speaking for Indian tribes and many individual Indians of the United States and Alaska, having a desire to promote the ultimate adjustment of Indian life ways within the larger American community in a manner to preserve Indian cultural values; and

Whereas the Congress of the United States and the Commissioner of Indian Affairs have repeatedly indicated a desire not to bring about termination for any group of Indians until the people in such group were prepared to take their place in the American society, but,

Whereas, in spite of such indications, the Congress and the Commissioner of Indian Affairs have moved rapidly to terminate Indian groups whose people are in dire and desperate straits from the standpoint of health, education, and economic opportunity; and

Whereas such movement toward termination has been carried on not only directly but indirectly through regulations and administration practices designed to divest the Indian people of their lands, thereby aggravating further their economic status; and

Whereas such premature termination can only lead to tremendous suffering by the Indian people and will result in substantial and continued expense to the various States and counties which will be required to assist such people; and

Whereas this body at the 1956 convention at Salt Lake City, Utah, formulated a statement of policy in the form of Resolution No. 1 which we earnestly believed would assist in the solution of many of the aforementioned difficulties; and

Whereas there were introduced in the 85th Congress, 1st session, Senate Concurrent Resolution 3, S. 809 (industrial development), S. 964 (aid to depressed areas), which said resolutions were actively and ardently supported as constructive efforts to establish a progressive and fundamentally sound Indian policy, by Indian groups and this organization, as well as by numerous non-Indian groups recognizing the social and moral obligations of the United States;

Now, therefore, after further consideration and deliberation, and being satisfied that the aforesaid statement of policy is fundamentally sound, we do hereby reaffirm said statement of policy, urge the immediate reconsideration of House Concurrent Resolution 108 (83d Cong.) insofar as it declares a policy of termination of Federal supervision "as rapidly as possible" and urge in substitution thereof the following as a statement of national policy and as a guide to administration action:

1. A plan of development be prepared for each Indian group whose lands or other assets are held in trust, whether such lands or assets are fully defined or not, such plans to be designed to bring about maximum utilization of physical resources by the dependent population and the development of that population to its full potential, such plans to be prepared by the Indians of the respective groups, with authority to call upon the agencies of the Federal Government for technical assistance, and the ultimate purpose of such planning to be the growth and development of the resources of the people rather than the heedless termination of Federal responsibility for such people;

2. That requests for annual appropriations of funds be based on the requirements for carrying into effect these individual development plans, and the annual operating budget for the Bureau of Indian Affairs, to include sufficient funds to carry out the program needs of each planning group:

3. That such annual budgets include adequate funds to provide for the credit needs and for capital investment required for the full development of Indian resources;

4. That determinations with respect to the disposition of property or actions which may affect treaty rights or agreements be based on agreement between an Indian tribe or group and the United States;

5. That any transfer of services now provided by the United States for the benefit of Indians be jointly planned with the Indians;

6. That Public Law 280 (83d Cong.) be modified to provide that the assumption by States of jurisdiction in criminal and civil actions in Indian reservations be brought about only after negotiation between a State and an Indian tribe and only to the extent from time to time agreed upon by the Indian tribe;

7. That the Indian groups be kept fully advised at all stages of pending legislation in which their interests may be involved and that the Secretary of the

Interior likewise keep them advised of regulatory measures which may be proposed for adoption, and accord full opportunity to the Indian groups and their representatives to be heard and have their needs and views considered in the formulation, modification, or repeal of regulatory measures; and

8. That a concentrated effort be made to retain, rather than dispose of, Indian lands in order to allow the Indians sufficient economic units upon which to improve their economic conditions and that administrative regulations and practices be reviewed, moidfied, and amended to bring about such result.

RESOLUTION NO. 2—TRUST LANDS

Be it resolved by the National Congress of American Indians in convention assembled at Claremore, Okla., October 28 to November 1, 1957, That we reaffirm the view expressed at our 1956 convention concerning the disposition of Indian trust land:

> "* * * that the Bureau of Indian Affairs be asked to stop immediately the sale of trust land to non-Indians without first giving the tribal governing body of each reservation a prior right and opportunity to purchase same and making funds available for such purpose * * * that if it is necessary to sell individually owned trust land, that it be sold to the tribes involved in order that what little land is left may continue to be held in Indian ownership." (Resolution No. 8, 1956)

and recognizing:

1. That the Bureau of Indian Affairs has affirmed its position that individual rights are paramount to tribal rights in the disposition of trust or restricted lands, which must be governed by title 25, Code of Federal Regulations 241; that the United States Government has no equitable or moral rights to deny an Indian's aplpication for a fee title, and that the Bureau of Indian Affairs recognizes the individual Indian's undeniable right to ask for a supervised land sale.

2. That this policy, which has continued with unabated intensity since the convention of a year ago, is a revival of the policies of fee-patenting and alienation of lands by which some 35 years ago Indians were extensively deprived of their land base.

3. If this policy is permitted to continue whereby the rights of the individual are deemed exclusive and override even the rights of the individual's tribe, then termination in fact is being accomplished without consent of the Indian people themselves, and with reckless disregard of treaty obligations.

4. We renew our plea to the Bureau of Indian Affairs and to the United States Congress that the sale of trust or restricted lands to non-Indians be halted until and unless there be accorded the tribal governing body of the reservation concerned a priority right to purchase the same, and, where the tribe is without funds reasonably available for the purchase, to make funds available to the tribe for that purpose.

RESOLUTION NO 3—ARTS AND CRAFTS

Whereas Indian silversmiths have made a great and significant contribution to American art through the production of their handmade jewelry; and

Whereas the American people have both recognized and respected the traditional skill and talent of the handicraft of the Indian silversmiths, as manifested through their consistent purchase of unique Indian silver jewelry; and

Whereas there is a growing number of people who have for selfish, commercial gain undertaken large-scale machine manufacture of imitation Indian jewelry by producing synthetic products of such inferiority as to mislead, receive, and defraud the American public, and to drive the Indian silversmiths from the jewelry market; and

Whereas such deceptive commercial practices are both detrimental to the American public and destructive of an important facet of American art; and

Whereas State legislatures, such as that of New Mexico have already passed legislation pertaining to the Zuni people to protect the consuming public and the Indian silversmiths in pursuing their trade by making it unlawful to display for sale or trade any jewelry which resembles American Indian handicraft unless such jewelry is clearly identified as a machine-made copy: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, That the Congress of the United States be urged to proceed promptly to enact comprehensive legislation to safeguard the American public from being victimized, misled, and defrauded by manufacturing merchants who, in an ever-expanding program of production, are cheating the consuming public and vitiating the art of the Indian silversmiths which has become a part of the American heritage, and that the Congress of the United States embody as a vital part of this legislation the requirement of clear identification of any and all "Indian jewelry" which is not true handicraft, thereby implementing a basic part of our country's philosophy that truth is a fundamental component of freedom.

RESOLUTION NO. 4—CLAIMS

Whereas, the Indian Claims Commission presently recognizes and hears claims for treaty and nontreaty tribes, groups, and bands but it is apparent that many tribes, groups, and bands of Indians have been inadvertently omitted from participating in these claims because the members failed to hear or be informed of the deadline for filing said claim and because many Indian groups were not represented by counsel: Now, therefore, be it

Resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, urges that the Indian Claims Commission Act be amended and the Commission hear and determine new and additional claims for all tribes, groups or bands, treaty or nontreaty, whether recognized by the United States or the Bureau of Indian Affairs or not, and that this amendment to the Indian Claims Commission Act of 1946 include all of the aborginal peoples in the territories and possessions of the United States.

RESOLUTION NO. 5—CLAIMS

Whereas, it appears that the Indian Claims Commission has entered final judgments in 124 claims out of 852 pending before it, and is substantially abreast of its docket of cases placed in readiness for final determination; and

Whereas it appears that the Department of Justice has failed to assign sufficient manpower to the claims cases of Indian tribes and groups and has failed to make even an answer or plea with respect to 147 of such claims, and by its "no settlement" policy has refused to settle cases even where to do so might be a matter of good business judgment, thereby imposing on tribes great expense and delay for the complete trial of such cases: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, That we commend the Indian Claims Commission for staying abreast of its work and call upon the Department of Justice in good faith to assign manpower to Indian claims cases to enable them to be expedited and finally determined, and to reverse its "no settlement" policy to permit settling meritorious cases where the interest of the United States and the Indians would be served.

RESOLUTION NO. 6—CLAIMS

Whereas by virtue of the decision of *Squire* v. *Capoeman* (351 U. S. 1), Treasury Bulletin 56–342, was issued, which states that income held in trust for or received by the patent holder which is directly derived from the allowed and restricted Indian lands, while such lands are held by the United States, is exempt from Federal income tax; and

Whereas such exempt income includes rentals, including crop rentals, royalties, proceeds of sales of the natural resources of such land, and income from the sale of crops grown upon the land and from the use of the land for grazing purposes; and

Whereas many years last past, members of the various Indian tribes paid income tax, upon income which such members were not required to pay by virtue of such income coming within the exempt classification; and

Whereas such Indians should not be penalized by their guardian for not filing a claim for refund within the period of the statute of limitations: Now, therefore, be it

Resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, supports S. 1839 (85th Cong.) or legislation of like purpose, which will allow a claim for refund to be filed by such Indians beyond the period of the statute of limitations.

RESOLUTION NO. 7—DISCRIMINATION

Whereas it has come to the attention of the National Congress of American Indians that discrimination by various police departments exists in areas where Indians are located and especially adjoining the Indian reservations;

Whereas such discriminatory acts tend to take the form of physical brutality, too-ready arrest, holding prisoners incommunicado, and unwholesome conditions of imprisonment; and

Whereas the victims of arrest are often not advised of their rights or provided with proper legal counsel, resulting in excessive fines and disproportionate penalties; and

Whereas they are denied the justice guaranteed to all citizens equally under the Constitution of the United States of America: Now, therefore, be it

Resolved, That the National Congress of American Indians take such action as may be indicated by the facts of the individual situation or channel any such complaints pertaining to the above to the proper agencies for appropriate action.

Report of Committee on Discrimination, unanimously adopted by the convention.

Delray B. Echo Hawk, chairman, Pawnee; Irene D. Mack, Menominee; Nelson Jose, Pima; Albert Cobe, Chippewa; Jennie Weso, Menominee; Levi Horsechief, Pawnee; Austin Realrider, Pawnee; Narcisse Brave, Rosebud Sioux; LaVerne Madigan, Consultant, AAIA.

RESOLUTION NO. 8—DISCRIMINATION

Whereas the National Congress of American Indians is aware of the fact that the regulation of the sale and use of intoxicating beverages is peculiarly a matter of State control, and requires regulation and limitation so that individuals who are not fully responsible in the use of such beverages are denied the privilege of purchasing or using them; and

Whereas the misuse of such beverages is not a matter of race or tribal status, but a matter of individual propensity or irresponsibility; and

Whereas it appears from facts referred to this convention by members of the Coeur d'Alene Tribe that in the State of Idaho in certain localities, tavernkeepers discriminate against Indians in the right to purchase, or if sold, to consume, such beverages on particular premises, and base such discrimination on the fact that the individual is Indian rather than on his individual propensity to misuse the beverages: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, That we support the views of the Coeur d'Alene people that the discrimination practiced by some Idaho vendors of alcoholic beverages is unlawful and unreasonable, and that we call upon the State of Idaho by appropriate law or regulation to require that the purchase or use of alcoholic beverages be based upon individual responsibility and forbidden on the basis of individual abuse or propensity rather than upon the basis of race, tribal status, or other matter unrelated to the abuse of the privilege.

RESOLUTION NO. 9—ECONOMIC DEVELOPMENT

Whereas Senator Paul Douglas of Illinois is again during the 85th Congress striving to bring about the enactment of a bill to provide aid to economically distressed areas, and it is known that he worked hard on similar bills which passed the United States Senate in 1955 and 1956; and

Whereas Senator Paul Douglas is not a member of the Indian Affairs Subcommittee, but he has given unusual and extraordinarily sympathetic understanding to the problems of Indians; and

Whereas Senator Paul Douglas amended his first bill to provide that Indians be specifically included to benefit from the bill if enacted: Now, therefore, be it

Resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, extends warm and deep appreciation to Senator Paul Douglas for his efforts and his interest and his attitude toward American Indians.

RESOLUTION NO. 10—FISHING RIGHTS

Whereas the United States in conjunction with each treaty tribe reserved fishing rights on waters adjacent to their ancient tribal lands at all "usual and accustomed grounds or stations" but failed to reserve such rights to nontreaty tribes, groups and bands: Now, therefore, be it

Resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, urges that Congress reserve to each Indian tribe, group or band, the fishing rights at all usual and accustomed grounds and stations that said tribe, group or band enjoyed aboriginally whether treaty or nontreaty Indians.

RESOLUTION NO. 11—HEALTH, EDUCATION, WELFARE

Whereas the American Indians' social advancement is impeded by his lack of knowledge of health and welfare services available to him from Federal, State, and local agencies; and

Whereas it is believed that the Bureau of Indian Affairs in cooperation with the Federal, State and local agencies could devise plans and programs for the dissemination of this information, which would result immeasurably in the improvement of his social, economic and health levels: Now, therefore, be it

Resolved, That the Bureau of Indian Affairs in cooperation with said agencies be urged to devise and implement a program to make known and available these services to Indian citizens.

RESOLUTION NO. 12—HEALTH, EDUCATION, WELFARE

Whereas based on the reports of the staff of the division of Indian health, the National Congress of American Indians, is of the opinion that progress has been made in improving both medical and public health services provided for Indians during the 2 years of its administration of the Indian health program: Now, therefore, be it

Resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, endorse in full the recommendations of the Suregon General to the Congress of the United States for funds for the operation of Indian health program for the fiscal year of 1959. While improvements have been made during the past 2 years in the expansion of health services for Indians under the administration of the Public Health Service, Indian health is still the worst in the Nation, and the NCAI is of the opinion that increasing appropriations should be made by the Congress from year to year until the standard of Indian health has been brought to the same standards as those of other racial groups.

RESOLUTION NO. 13—HEALTH, EDUCATION, WELFARE

Whereas Indian health is the worst in the Nation, and the Indian is still suffering from common infections and preventable diseases which make him the victim of sickness, crippling conditions, and premature deaths which stand out in sharp contrast when compared to the rest of the population; and

Whereas the average age at the time of death is 39 years as compared with 60 years for the rest of the general population; and

Whereas pneumonia, influenza, dysentery, enteritis, and tuberculosis are among the common communicable diseases, which are causes of illness, and account for a large majority of the deaths; and

Whereas of every 1,000 Indian births 65 of the babies do not live to be 1 year old, as compared to the 27 infants deaths for every 1,000 births for the general population; and

Whereas these alarming figures as disclosed from reports of the Surgeon General's Department in charge of Indian health is a matter of vital concern not only to the Indians of the United States, but to the general public as well; and

Whereas there is an urgent need for additional health facilities, Indian hospitals and sanitation; and

Whereas in the face of this record the President of the United States and the Bureau of the Budget, in a well-meaning effort to curb inflationary trends, has caused to be frozen the funds provided and allocated for the construction of the hospitals at Shiprock, N. Mex.; Gallup, N. Mex.; Sells, Ariz.; and Kotzebue, Alaska; and

Whereas Indian health and the need for Indian health facilities to be served by these hospitals is most urgent and critical: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, That the President of the United States and the Bureau of the Budget be, and they hereby are, urged and requested to release the funds for construction of the aforesaid hospitals: Be it further

Resolved, That copies of this resolution be mailed to the President of the United States, the Surgeon General and to the appropriate congressional committees dealing with health and welfare.

RESOLUTION NO. 14—HEALTH, EDUCATION, WELFARE

Whereas a high proportion of admissions to Indian hospitals and related medical facilities is due to illness which is predominantly resultant from unsanitary conditions due primarily to inadequate and unprotected water supplies and inadequate facilities for disposal of human waste and related environmental factors; and

Whereas the use of open surface and unprotected well-water sources of supply is to be found in some areas, and hauling of water for domestic use distances of 1 to 10 miles is a common practice on many reservations; and

Whereas promiscuous disposal of human wastes or use of totally inadequate privy facilities are found in some areas, with resultant fly problems and high incidence of diarrhea and dysentery; and

Whereas H. R. 246 and 2894 and S. 1498 (85th Cong.) known as the sanitation facilities bills, sponsored by the Public Health Service, embody principles and provisions which, if enacted into law, will greatly aid the Public Health Service in remedying these conditions and will improve the health of Indians generally: Now, therefore, be it

Resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, recommends and endorses the principles incorporated in these sanitation bills and urges that every effort be made to bring about the enactment of this legislation in the next session of Congress; be it further

Resolved, That copies of this resolution be sent to the Surgeon General of the United States and appropriate congressional committees dealing with this type of legislation.

RESOLUTION NO. 15—HEALTH, EDUCATION, WELFARE

Be it resolved by the National Congress of American Indians in convention assembled at Claremore, Okla., October 28 to November 1, 1957, That we support that portion of the joint memorial of the Idaho State Legislature at its 1957 session which reads as follows:

"A JOINT MEMORIAL

"*To the Bureau of Indian Affairs, Department of Interior, Washington, D. C.:*

"We, your memorialists, the Legislature of the State of Idaho, as assembled in its 34th session, do respectfully represent that—

"Whereas there has been heretofore at Chemawa, Oreg., an Indian school intended by the act which established it to give training, instruction, and guidance to those Indian boys and girls who came from broken homes and who had no parents; and

"Whereas, as originally operated and as intended, this school was open to the boys and girls from all the various Indian tribes who came from broken homes and who did not have a father or a mother and who needed such an establishment; but

"* * * orders and directives have been so made and promulgated that Indian boys and girls from tribes other than the Navaho Tribe have been forced out of the school until now by the latest order from the Bureau of Indian Affairs boys and girls who do not belong to the Navaho Tribe will be unable to attend the school; and

"Whereas Indian boys and girls who do not have the aid and assistance of parents and who come from broken homes are as badly in need of assistance as ever, and now, under present directives regarding the operation of this school, do not have a place to turn; and

"Whereas it was the intent of the law which created the school at Chemawa, Oreg., that all Indian tribes should have equal rights therein and that it care for all Indian children who need care; and

"Whereas it is implicit in a democratic form of government and in a democratic Nation that all peoples should be given, as nearly as possible, the same opportunity, and that the Government should provide for all its peoples, without discrimination, equal assistance: Now, therefore, be it

Resolved, by the house of representatives, the senate concurring, That we do most respectfully urge upon the Bureau of Indian Affairs of the Department of Interior of the United States of America that it examine and look into the policies and the operations of the school at Chemewa, Oreg., and discover what is happening there, and that it take corrective measures to make the service offered by this school available to all Indian children; and be it further

"*Resolved,* That the secretary of state of the State of Idaho be, and hereby is, authorized and directed to send a copy of this joint memorial to the Secretary of Interior, to the officers in charge of the Bureau of Indian Affairs, and to the Senator and Representative of the State of Idaho in the United States Congress."

RESOLUTION NO. 16—HEALTH, EDUCATION, WELFARE

Whereas the Pawnee Indian Boarding School, located on the Pawnee Reservation, is the only centrally located Indian school for the five tribes of Pawnee, Ponca, Otoe, Tonkawa, and Kaw; and

Whereas many Indian families are financially unable to send their children to public school; and

Whereas the Bureau of Indian Affairs has adopted a policy of gradually closing this school by limiting enrollment of Indian children; and

Whereas, if more needy children from the five tribes herein referred to were permitted to attend their Government school, it would help prevent juvenile delinquency, which is increasing on the reservation; and

Whereas tribal officials have been advised that the Indian school has been offered by the Government to the public-school system of Pawnee; and

Whereas, under a treaty of 1857 with the Pawnees, the United States Government set up this school for the benefit of the five tribes, and as schools on adjoining reservations were closed neighboring tribes sent their children to the Pawnee school and still do: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1957, That it supports the tribes in asking that the Pawnee School be reopened to serve the Indian people of that area and that all the facilities of the school be fully utilized to that end for the above-mentioned five tribes without limitation to enrollment of their children.

RESOLUTION NO. 17—HEALTH, EDUCATION, WELFARE

Whereas the greatest need of the American Indian today is for education of the Indian youth: Now, therefore, be it

Resolved, That a fund of $10 million be appropriated by Congress for an American Indian scholarship fund, for vocational scholarships on a high-school level, and on a college and professional level, to be administered to needy American Indian students by an independent board of 6 appointed by the President, consisting of 3 enrolled American Indians and 3 professional educators, to administer these funds for candidates with Indian blood by competitive examinations for 9,000 students annually, the fund balances to be kept invested under laws governing trusts; one-half of the fund to be dispersed to needy students as a revolving fund to students not to exceed $1,000 each per year, to be repaid within a reasonable time after completion of the particular course.

RESOLUTION NO. 18—JURISDICTION

Whereas the National Congress of American Indians has for the last 3 years called for a repeal of Public Law 280 (83d Cong.); and

Whereas the National Congress of American Indians has taken the stand that, before any congressional legislation is passed, there must be agreement and consent of the tribes affected: Now, therefore, be it

Resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, does hereby go on record as supporting H. R. 7399 (Congressman Lee Metcalf, Montana) or legislation of similar import, which calls for the consent of the tribe occupying the particular Indian country affected by the assumption of jurisdiction and provides for agreement by the State and the tribe concerned, and for partial assumption of jurisdiction with the consent and agreement of the State and the particular tribe concerned.

RESOLUTION NO. 19—LAND

Whereas Indian lands are rapidly diminishing as a result of sales of trust allotted tracts of land; and

Whereas legislative bills have been introduced in Congress which favor both rehabilitation programs for the American Indians and immediate termination of Federal control over Indian land and the Indian people; and

Whereas the mere sale of Indian land will not solve the problems of the Indian people nor the problems brought about by Federal administration of the Indians' problems and affairs; and

Whereas the Bureau of Indian Affairs has curtailed the use of Federal funds which may be used for the purpose of revolving credit loans to tribal members: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, That the Secretary of the Interior and/or the Commissioner of Indian Affairs declare a moratorium in the alienation of trust lands to non-Indians, for a sufficient period of time to give the American Indian tribes opportunity to plan a program of full utilization of Indian land through purchase and rehabilitation programs.

RESOLUTION NO. 20—LAND

Whereas many of the allotted Indian reservations in the United States are lacking sufficient funds with which to purchase heirship and other lands; and

Whereas provision is made in the Indian Reorganization Act of June 18, 1934, for an annual authorization of $2 million for just this purpose: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, That the Bureau of Indian Affairs be asked to request an annual appropriation of $2 million under authority of the Indian Reorganization Act of 1934 for the purchase of Indian allotments in the name of the United States in trust for Indian tribes.

RESOLUTION NO. 21—LAW AND ORDER

Whereas various phases of the law and order programs on most reservations need increased support from the Federal Government; and

Whereas neither tribal governments nor the States involved are able to meet the necessary requirements to carry on satisfactory programs in the field of law and order: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, That the Federal Government provide funds necessary to maintain law and order on the reservations of the tribes where such assistance is needed.

RESOLUTION NO. 22—NOTICE TO TRIBES

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, That the national congress requests that legislation introduced in the Congress of the United States be called to the immediate attention of the particular tribe such legislation affects;

Whereas numerous bills are introduced into Congress of the United States each year relating to Indian matters and to specific Indian tribes; and

Whereas the particular Indian tribe, whom such legislation affects, is not notified of such legislation in sufficient time within which to give due consideration to the legislative matter, and prepare the necessary evidence and testimony either in support, or in opposition of such legislation; and

Whereas if upon the introduction of said legislation, the particular tribe in question were immediately notified of said legislation, a more adequate coordination between the particular tribe of Indians and the Congress of the United States could be accomplished and reduce conflicting interests: Therefore be it

Resolved by the National Congress of American Indians, That each individual Member of the House of Representatives and of the Senate be requested at the earliest possible moment to notify the tribe concerned of the consideration for introduction of legislation affecting the specific tribe, and that the clerks of each of the committees of the House and Senate be instructed to transmit copies of the bill immediately upon introduction; and be it further

Resolved, That a copy of this resolution be sent to each Member of the House of Representatives and of the Senate of the United States.

RESOLUTION NO. 23—TAXATION

Whereas, on February 19, 1957, the District Director of Internal Revenue, at Seattle, Wash., ruled that payments received by individual members of the Yakima Tribe, from the proceeds derived from the sales of timber from Yakima tribal lands would be taxable to the individual; and that payments to individual members of the Yakima Tribe from funds resulting from a settlement of a legal claim of the Yakima Tribe against the United States for the destruction of the traditional tribal fishing locations on the Columbia River, reserved to said tribe by article 3 of the treaty of June 9, 1855, between the Yakima Tribe and the United States, resulting from the construction of the Dalles Dam, would be taxable depending upon whether the award constituted gain or income to the tribe; and

Whereas this ruling raises the fundamental question whether the funds of an Indian tribe under guardianship of the United States, held by the United States in trust for an Indian tribe, and deposited in the United States Treasury to the credit of the tribe, and subject to disbursement only as Congress directs, are taxable to the individual members when liquidated through per capita payments under the Federal income-tax laws, without specific provision for such tax by Congress: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, That we oppose the ruling of the Seattle Director of Internal Revenue, and authorize and direct the representatives of this organization by all lawful and proper means to seek to bring about a reversal of the view expressed, whether through administrative action, litigation, or by legislation.

RESOLUTION NO. 24—TAXATION

Whereas on July 10, 1957, the Commissioner of Internal Revenue, in Washtington, D. C., in 2 opinions, held that the judgment moneys due the Kaw and Osage Tribes in cases before the Indian Claims Commission successfully prosecuted under the Indian Claims Commission Act of August 13, 1946, volume 60, Statutes, page 1049, constitute income in the form of capital gain to the individual members of these tribes and

Whereas the above rulings raise basic questions concerning Indian taxation, whether the balance of the consideration equitably due an Indian tribe for the cession of its tribal lands to the United States, due from the United States since the date of the execution of the treaty, and paid to the tribe in the form of a judgment recovered in proceedings before the Indian Claims Commission, is taxable to the tribe or its members under the Federal income-tax laws, or whether just compensation paid to the tribe pursuant to judgment is taxable to the tribe or its members under the Federal income tax laws: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, That we oppose the rulings on moral as well as legal grounds, and authorize and direct the representatives of this organization to oppose and seek to overcome the rulings by all proper and lawful means, including seeking an administrative reversal of the rulings, participating in litigation provoked by them, or seeking a legislative reversal of them.

RESOLUTION NO. 25—TAXATION

Whereas due to lack of education and experience many Indians are in ignorance of their obligation to pay Federal income taxes under certain proper circumstances; and

Whereas assessment of penalties in such instances is unfair and unjust; and

Whereas instances of wrongful and illegal collection and attempted collection of taxes from Indians have come to the attention of the National Congress of American Indians: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, That the organization hereby authorizes and directs its representatives by all lawful and proper means to bring about correction of unfair, wrongful, and illegal situations, whether through administrative action, participation in litigation, support of legislation, or other proper means.

RESOLUTION NO. 26—TERMINAL PROGRAMS

Be is resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, That the complete costs of any terminal programs, if such terminal programs are acceptable to the tribes affected, be borne by the Federal Government.

RESOLUTION NO. 27—TIDELANDS

Whereas it appears that a few Indian reservations in westren Washington may have been inadvertently deprived of tidelands and submerged lands adjacent to reservations, because of clerical or technical mistakes in descriptions which were obviously contrary to the intention of the Indians and the United States Government; and

Whereas much of the economy of the Indians was and is dependent on the resources of these waters and submerged lands and it was the intention of the United States and the Indians that all reserved lands should include all of the adjacent waters whether tidelands or other waters, including lakes, rivers and streams: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, That all tidelands and submerged lands adjacent to any Indian reservations, including the beds of streams and lakes be quieted in the respective tribes to the extent of the aboriginal use of such lands, all at the expense of the United States.

RESOLUTION NO. 28—TIMBER

Whereas it appears that the Bureau of Indian Affairs has flagrantly abused its trust responsibility in the handling of Quineault timber sales, according to the report 971 of the 85th Congress, prepared by the Committee on Interior and Insular Affairs, dated August 15. 1957: Now, therefore, be it

Resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, expresses its thanks, approval and appreciation to the subcommittee report on the Quineault Timber Sales, No. 971, 85th Congress, and the good work done by the committee and its members in their investigation of the timber lands.

RESOLUTION NO. 29—TRESPASS

Whereas there is pending before the 85th Congress a bill (H. R. 7240), which provides for amending title 18 of the United States Code to make it unlawful to destroy, deface or remove certain boundary markers on Indian reservations, and to trespass on Indian reservations to hunt, fish or trap; and

Whereas it is urgent that a law be enacted to provide for penalties assessed against non-Indians who have no respect or regard for tribal ordinances governing the conservation of fish and wildlife on Indian reservations: Now, therefore, be it

Resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, does hereby go on record as favoring the enactment of H. R. 7240.

RESOLUTION NO. 30—WATER RIGHTS

Whereas H. R. 3771, before the House Committee on Indian Affairs, would authorize the Secretary of the Interior to transfer Indian irrigation and power project care, operation and maintenance to white users' irrigation associations and districts, and providing that such associations and districts may proceed in State courts against such Indian water users who are unable to pay the white users' assessments; and

Whereas under certain conditions, this bill would also subject Indian trust or restricted lands to seizure and sale if such assessments were not paid; and

Whereas such provisions do not act to further the interests of Indian agricultural development; and

Whereas such provisions would constitute of the Secretary of the Interior a bill collector for the white users' associations and districts subject to various unforeseen political pressures which would affect alienation of Indian agricultural lands; and

Whereas said bill fails to provide that non-Indian owners would be subject to the same expedient collection methods for assessments as those provided to be enforced against Indian owners; and

Whereas the effect of that provision of the bill relating to payment of assessments "out of any appropriation available for the care, operation, and maintenance of the project if Indian land be exempted by statute would in effect be subsidizing such white users' associations or districts to the extent such payments were made; and

Whereas the inescapable effect of said bill would be an accelerated rate of alienation of Indian-owned agricultural lands: Now, therefore, be it

Resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, oppose the adoption of H. R. 3771 (85th Cong.) or any similar legislation.

RESOLUTION NO. 31—WATER RIGHTS

Whereas economic development of arid irrigable Indian lands is dependent upon water from rivers and streams; and

Whereas as a matter of law, as declared by the United States Supreme Court in the Winters case and other Federal decisions following the Winters doctrine,

the Indian people have primary and superior right to the use of such water for the development of their lands, and which is also a matter of justice and moral right; and

Whereas the Indian tribes in these arid regions until recent times have been unable to, and prevented from developing or even beginning to develop and use their water resources, because of economic and other disabilities; and

Whereas throughout our country's history the Federal courts, despite local economic and political pressure, have stood firm to protect water rights and other rights of the American Indian; and

Whereas strong political forces representing economic interests having rights subordinate and inferior to those of the Indians, are attempting to usurp Indian water resources by promoting congressional legislation which would eliminate the prior Indian water rights specified under the Winters doctrine and would remove the jurisdiction involving Indian water rights from the Federal courts to the many varied State courts; and

Whereas success of such non-Indian pressure groups would greatly hinder if not defeat the efforts of these Indians to improve their economic condition by developing and beneficially using their own water resources; and

Whereas the Indians in the arid regions need the encouragement and assistance of Congress and the American people to exercise their right to these Indian water resources, and overcome the effort to divest them therefrom: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, That it hereby goes on record as favoring the protection of the prior and superior rights of the Indians of arid regions to the use of their water, and opposes any legislation to the extent that it would impair their rights; be it further

Resolved, That the people of the United States of America be reminded that they are hereby urged to reaffirm their solemn pledge to the American Indian that this Nation under God shall not violate its legal and moral obligations to protect, preserve, and promote the welfare and best interests of the noble citizens who first settled this land—the American Indian.

RESOLUTION NO. 32—WATER RIGHTS

Whereas it appears that the water rights of certain tribes, bands or groups, both treaty and nontreaty Indians, having ancient tribal lands or reservations adjacent to rivers or other bodies of water in western Washington have been deprived of water and water rights without compensation by third parties: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, That the National Congress of American Indians assist and support each tribe, band, or group of Indians having aboriginal tribal lands or reservations in the State of Washington adjacent to bodies of water or watercourses in its effort to secure full compensation from any party who uses, appropriates or interferes with any portion of said body of water, or any rights connected therewith.

RESOLUTION NO. 33—REA—WASHINGTON

Whereas many reservations in the State of Washington are without electricity, although land and water rights have been taken from some of these reservations for power projects to encourage industries on the reservations: Now, therefore, be it

Resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, supports Indian tribes in the State of Washington in petitioning the Rural Electrification Administration to extend its plan of rural electrification to all Indian reservations in the State of Washington.

RESOLUTION NO. 34—VOTER EDUCATION

Whereas the American Heritage Foundation has recently expressed signal recognition and commendation of the NCAI program to encourage the Indian to

take advantage of his opportunity to participate in public affairs, especially the exercise of the ballot: Now, therefore, be it

Resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, continue its policy of encouraging its members to avail themselves of the privileges of American citizenship, particularly the exercise of the ballot.

RESOLUTION NO. 35—COLVILLE TRIBE

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, That the National Congress of American Indians supports the Confederated Tribes of the Colville Reservation in their opposition to section 4 of Public Law 772 (84th Cong.), whereby a substantial sum of money is made payable to Ferry and Okanogan Counties, State of Washington, from tribal funds in payment for certain services allegedly furnished the Indians of the Colville Reservation, but which services are not properly chargeable separately to the tribes, but are available to any individual citizen on the basis of the taxes for which he is liable, the payment violating the fundamental premise that Indian tribes as such are not taxable.

RESOLUTION NO. 36—CROW TRIBE

Whereas the Crow Tribe of Indians of the State of Montana are the owners of a natural power site located within the boundaries of the Crow Indian Reservation; and

Whereas the United States Government desires to acquire said power site and reservoir area for the purpose of constructing what is commonly called the Yellowtail Dam; and

Whereas the Crow Tribe of Indians, through its Crow Tribal Council, will sell the said Yellowtail Dam site for the sum of $5 million; and

Whereas there is presently pending legislation in the United States Congress providing for the payment to the Crow Tribe of Indians for the said power site, and that there is also pending in the United States District Court of Montana, an action against the Crow Tribe of Indians to condemn the site; and

Whereas the jurisdiction of the amount of $5 million for said dam site has been made through Barry Dibble, an engineer of Redlands, Calif., and of Julius Krug, former Secretary of the Interior of the United States: Now, therefore, be it

Resolved, That the National Congress of American Indians supports the Crow Tribe of Indians in their claim of $5 million for the sale of said dam site, and that resistance be offered for the sale of the dam site for any consideration less than the $5 million which is justifiably proposed by the Crow Tribe of Indians.

RESOLUTION NO. 37—CROW TRIBE

Whereas the Crow Tribe of Indians, pursuant to the act of April 27, 1904 (33 Stat. 352), ceded to the United States Government certain lands formerly included in the Crow Indian Reservation in Montana for development of what is commonly called the Huntley reclamation project, and, as the lands were sold, the Crow Tribe was to receive the proceeds therefrom; and

Whereas approximately 4,900 acres of said lands are at the present time undisposed of; and

Whereas a bill has been introduced in the 85th Congress (S. 2512) for the payment of compensation to the Crow Tribe of Indians for said tracts of land: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, That S. 2512 (85th Cong.) be supported for the payment of the fair and reasonable consideration to the Crow Tribe of Indians for said undisposed tracts of land.

RESOLUTION NO. 38—CROW TRIBE

Whereas pursuant to section 2 of the act of June 4, 1920 (41 Stat. 751), as amended, no conveyance of land by any Crow Indians shall be authorized or approved by the Secretary of the Interior to any person who owns at least 640 acres of agricultural land or 1,280 acres of grazing land within the present boundaries of the Crow Indian Reservation, nor to any person who, with the land to be acquired by such conveyance, would become the owner of more than 1,280 acres of agricultural land or 1,920 acres of grazing land within said reservation; and

Whereas said act provides that any conveyance by any such Indian, made either directly or indirectly to any such person, or any land within said reservations as the same now exists, whether held by trust patent or by patent in fee, shall be void, and the grantee accepting the same shall be guilty of a misdemeanor; and

Whereas there is presently pending a bill in Congress amending the said act for the purpose of removing the above restrictions, and for the further purpose of clearing the cloud on title as now exists to those purchasers who have purchased land in excess of the acreage limitation; and

Whereas on April 20, 1957, at a meeting of the Crow Indian Tribal Council. upon motion duly made and seconded, and unanimously carried, the Crow Tribe expressed itself by requesting that section 2 of the 1920 Crow Allotment Act remain in full force and effect, the reason being that said section is in accordance with the basic policy of the Secretary of the Interior in that section 2 was enacted for the protection and preservation of the Indian, during the trust period and thereafter; and, therefore, it would be against this basic policy by confirming the illegal and irregular titles that were issued in contravention of said section 2: Now, therefore, be it

Resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, lends full support to the Crow Indian Council in opposition of the passage of said congressional bills (H. R. 2381 and S. 332) amending said act by removing the restrictions and validating the illegal titles; and be it further

Resolved, That the National Congress of American Indians advocates the enforcement of said section 2 in accordance with the terms as provided therein, and that the Secretary of the Interior and the Justice Department of the United States be requested to take immediate action to effect the enforcement of said section 2 of the Crow Allotment Act of June 4, 1920.

RESOLUTION NO. 39—CROW TRIBE

Whereas section 2 of the act of June 4, 1920 (41 Stat. 751), as amended, provides that no conveyance of land by any Crow Indian shall be authorized or approved by the Secretary of the Interior to any person, company, or corporation who owns at least 640 acres of agricultural land or 1,280 acres of grazing land within the present boundaries of the Crow Indian Reservation, nor to any person who, with the land to be acquired by such conveyance, shall become the owner of more than 1,280 acres of agricultural or 1,920 acres of grazing land within said reservation. Said act further provides that any conveyance of any such Indian, made either directly or indirectly to any such person, company, or corporation, of any land within said reservation as the same now exists, whether held by trust patent or by patent in fee, shall be void and the grantee accepting the same shall be guilty of a misdemeanor and be punished by a fine of not more than $5,000 or imprisonment not more than 6 months, or by both fine and imprisonment; and

Whereas there have been numerous violators of this provision of the Crow Allotment Act; and

Whereas the Crow Tribal Council, by resolution, has requested the United States attorney to investigate and prosecute such violators: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, That the National Congress of Americans Indians hereby supports the request of the Crow Tribal Council that immediate action be requested of the Attorney General of the United States of America.

RESOLUTION NO. 40—SPOKANE TRIBE

Whereas there is a dire need for home building and other essential building improvement on the Spokane Indian Reservation, State of Washington; and

Whereas there is an ample amount of timber on the Spokane Reservation to allow such a program, provided forestry regulations contained in the Code of Federal Regulations are amended; and

Whereas the present $100 free-usage permit is obsolete in that it was established when timber prices were very low: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, That we support the request of the Spokane Tribe that the Bureau of Indian Affairs grant an exception from the regulations to the Spokane Tribe of Indians to increase the stumpage value of individual free-usage timber permits from $100 to $500; and be it further

Resolved, That the language in such regulation be clarified to allow the permittee to trade a portion of his stumpage for the necessary finished lumber; that only one such permit be issued to any reservation family; and that permittees must receive approval of a building program cleared through a committee appointed by the superintendent and the business council before such timber permit is issued.

RESOLUTION NO. 41—OTOE AND MISSOURIA TRIBES

Whereas the Otoe and Missouria Tribes has recovered a judgment against the United States in the Indian Claims Commission, the distribution of which is now the subject of legislative attention pursuant to H. R. 8524 (85th Cong.), which is supported by the tribe: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled at Claremore, Okla., October 28 to November 1, 1957, That we support the legislation respecting distribution of the judgment moneys to the extent it is endorsed by the said tribe, and that we direct the representatives of this organization, by all lawful and proper means, to assist in bringing about enactment of the said legislation.

RESOLUTION NO. 42—THREE AFFILIATED TRIBES

Whereas the Three Affiliated Tribes of the Fort Berthold Reservation have exchanged their land for the purpose of building the Garrison Dam in North Dakota; and

Whereas verbal agreement was given for shore rights and mineral rights to the Three Affiliated Tribes; and

Whereas a bill was introduced in the 84th Congress by Senator Young, of North Dakota, seeking the assurance of the shore rights and mineral rights and a specified quantity of kilowatt electrical power for the Three Affiliated Tribes; and

Whereas the tribes have modified the quantity of kilowatt power for free electricity for the Indians who yielded their lands for the Garrison Dam: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, That we support the request of the Three Affiliated Tribes of the Fort Berthold Reservation for reintroduction and passage of the Young bill, as modified.

RESOLUTION NO 43—THREE AFFILIATED TRIBES

Whereas Congress has made a study of juvenile delinquency, which study indicates that one of the problems respecting Indian reservations is the need for gainful employment of Indian youth; and

Whereas, the building of Garrison Dam and consequent flooding of lowlands and timber areas on the Fort Berthold Reservation, State of North Dakota, has resulted in depriving the Indian youth of the reservation of the opportunity for gainful employment in harvesting timber and posts: Now, therefore, be it

Resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, hereby supports the request of the Three Affiliated Tribes of the Fort Berthold Reservation that Congress authorize and cause to be built juvenile camps and recreational areas on the shorelands embraced in or adjacent to the Fort Berthold Reservation, to be managed by the Affiliated Tribes to assist in providing gainful employment of the Indian and other youth of the area and to bring about more complete utilization of the Garrison Dam facilities.

RESOLUTION NO. 44—THREE AFFILIATED TRIBES

Whereas the building of the Garrison Dam has caused the removal of houses, farms, and ranches on the Fort Berthold Reservation, State of North Dakota; and

Whereas these Government contracts call for allocation of moneys for the relocation within the reservation of these homes, farms and ranches; and

Whereas it is asserted by the Three Affiliated Tribes of the Fort Berthold Reservation that the newly constructed wells and home foundations are defective and inadequate, causing loss to the Indians, and cattle sheds agreed upon have not been constructed: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28, to November 1, 1957, That we request that the whole contract of the Government with the Three Affiliated Tribes of the Fort Berthold Reservation be investigated by the appropriate congressional committee, and appropriate legislation adopted to secure to the Three Affiliated Tribes the facilities they and their members were promised.

RESOLUTION NO. 45—HAVASUPAI TRIBE

Whereas the National Park Service has recently purchased 5 mining claims, comprising about 95 acres, within Cataract Canyon and near the Havasupai Indian Reservation, Ariz., from E. F. Schoeny, for the inclusion within the Grand Canyon National Park; and

Whereas the Havasupai Tribe originally owned and always has used the lands so acquired by the Federal Government;

Whereas the Havasupai Tribe does not now have any control over, or even any say in, the future use and development of said lands, and further fears that the Park Service will use the area without considering the best interests of tribal members; and

Whereas the present Havasupai Indian Reservation is too small to support all persons living thereon: Now, therefore, be it

Resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, supports the efforts of the Havasupai Tribe to have additional lands in Cataract Canyon, including the tracts recently purchased by the National Park Service, set aside for the use and benefit of the Havasupai Indians, and further endorses every administrative act or legislative proposal to achieve that end.

RESOLUTION NO. 46—FORT PECK TRIBES

Whereas surface rights to submarginal lands on the Fort Peck Reservation in Montana are held by the Assiniboine and Sioux Tribes of the Fort Peck Reservation by permit; and

Whereas legislation was introduced in the 85th Congress by Congressman Lee Metcalf, of Montana, whereby title to the said lands would be vested in the tribes; and

Whereas other proposals have been suggested and discussed in Montana to grant said lands and minerals to Roosevelt County, Mont., on the theory that the county, though never having had title to said lands or use of them, was entitled to them as a result of services rendered the Indians; and

Whereas the Assiniboine and Sioux Tribes of the Fort Peck Reservation through contributions out of tribal funds are paying the cost of the principal

services to Indians on the reservation in annual amounts now approximating $40,000 for relief and $35,000 for education, in comparison with which the county has never expended more than relatively trifling sums for relief, which then was held as a charge and collected from the lands of the particular allottees upon their death: Now, therefore, be it

Resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, supports the effort of the Assiniboine and Sioux Tribes of the Fort Peck Reservation to secure full title to the lands which have been long held only under permit, on the ground of moral and equitable right, and that the claim of the county in opposition to that of said tribes, being founded on neither title, past or present possession, nor valid claim of moral or equitable right, be opposed by this Congress.

RESOLUTION NO. 47—OGLALA SIOUX

Whereas the Oglala Sioux Tribe has requested conveyance of the so-called submarginal land to the tribe with trust title; and

Whereas Congressman E. Y. Berry has introduced H. R. 6958 (85th Cong.): Now, therefore, be it

Resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, expresses its thanks and appreciation to Congressman E. Y. Berry for introducing this bill and NCAI offers assistance and support in expediting action on this bill.

"H. R. 6958.—To provide that certain lands shall be held in trust for the Oglala Sioux Tribe in South Dakota

" * * * That the equitable title to the lands and interests in lands, together with the improvements thereon, acquired by the U. S. on or adjacent to the Pine Ridge Sioux Indian Reservation in S. D., under authority of title II of the National Industrial Recovery Act, approved June 16, 1933 (48 Stat. 200), the Emergency Relief Appropriation Act of 1935, approved April 8, 1935 (49 Stat. 115), and section 55 of the Act entitled 'An Act to amend the Agricultural Adjustment Act, and for other purposes,' approved August 24, 1935 (49 Stat. 750, 781), administrative jurisdiction over which was transferred from the Secretary of Agriculture to the Secretary of the Interior by Executive Order Numbered 7868, dated April 15, 1938, for the use and benefit of the Oglala Sioux Tribe is hereby declared to be in the U. S. in trust for the use and benefit of the Oglala Sioux Tribe in the same manner and to the same extent as other lands held in trust for the Oglala Sioux Tribe.

SEC. 2. Nothing in this Act shall deprive any person of any individual right, ownership, right of possession, or contract right he may have in any land or interest in land referred to in this Act."

RESOLUTION NO. 48—CHEYENNE-ARAPAHO TRIBES

Whereas there is pending in the 85th Congress, H. R. 6090, a bill to transfer to the United States in trust for the use and benefit of the Cheyenne-Arapaho Tribes of Oklahoma approximately 4,000 acres of land; and

Whereas congressional hearings on said bill have been held: Now, therefore, be it

Resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, favors the enactment by the Congress and the approval by the President of the United States of the pending bill; be it further

Resolved, That the executive director of this organization be and she hereby is authorized and directed to serve copies of this resolution upon the officers and persons charged with the consideration and disposition of the proposed legislation.

RESOLUTION NO. 49—CHEYENNE-ARAPAHO TRIBES

Whereas the Congress of the United States has enacted and the President of the United States has approved 5 acts during the respective years 1908, 1910, 1938, 1942, and 1946, which either restored lands in trust or sold same and paid the proceeds of said sales to the Cheyenne-Arapaho Tribes of Oklahoma; and

Whereas said lands were formerly part of the Cheyenne-Arapaho Reservation in Oklahoma and were determined surplus to military, Indian agency or Indian school needs for which originally set aside; and

Whereas during the year 1883 approximately 9,500 acres of the Cheyenne-Arapaho Reservation in Oklahoma were set aside by Executive order for the establishment of Fort Reno for the use of the military forces of the United States; and

Whereas subsequently said lands were declared surplus to the military forces of the United States and on December 31, 1949, were abandoned by said military forces; and

Whereas since said abandonment, and after exhaustive congressional committee hearings, the House of Representatives has passed two times (in separate Congresses) and the Senate has reported favorably bills to transfer said lands in trust for the use and benefit of the Cheyenne-Arapaho Tribes of Oklahoma: Now, therefore, be it

Resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, favors and urges the Congress of the United States to enact legislation and the President of the United States to approve the purpose of which either will restore said lands to the Cheyenne-Arapaho Tribes of Oklahoma or compensate them fully for the taking thereof; be it further

Resolved, That appropriate officers of this organization be and they hereby are authorized and directed to serve copies of this resolution upon the President of the United States, the Secretary of the Interior, the chairmen of the Senate and House Committees on Interior and Insular Affairs and each Member of the Oklahoma congressional delegation.

RESOLUTION NO. 50—MENOMINEE TRIBE

Whereas the Menominee Tribe of Indians of the State of Wisconsin under prevailing policies of the Government are required to submit plans by December 31, 1957, for the withdrawal of Federal services by the Bureau of Indian Affairs; and

Whereas there is pending in the Congress S. 2131 and H. R. 6322, 85th Congress, to extend the time for filing termination plans for a period of 2 years; and

Whereas there has been established by the State of Wisconsin a committee to study and advise with the Menominee Tribe and Federal authorities; and

Whereas congressional hearings have been held on the proposed legislation: Now, therefore, be it

Resolved, That the Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, favors the enactment by the Congress and approval by the President of the pending legislation as approved by the House of Representatives; be it further

Resolved, That the executive director of this organization serve copies of this resolution upon the officers and persons particularly charged with the consideration and disposition of the proposed legislation.

RESOLUTION NO. 51—COEUR D'ALENE TRIBE

Whereas a representative of the Coeur d'Alene Indian Tribe has requested an expression of sympathy and support of the efforts of certain members of his tribe to protect their treaty rights: Now, therefore, be it

Resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, does hereby express its sympathy toward and declare its moral support of these Indian people in their efforts to protect their treaty rights.

RESOLUTION NO. 52—SENECA NATION

Be it resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, joins

with the New York Junior Chamber of Commerce; Board of Supervisors, Cattaraugus County, N. Y.; Silver Creek Kiwanis Club and its members; Council of Churches of Buffalo, N. Y.; Conservation Forum of New York State; Chautauqua County Pomona Grange; Society for Pennsylvania Archeology; Archeological Society of Ohio; Christian social relations committee of First Congregational Church, Albany, N. Y.; Izaak Walton League of America, and Pennsylvania Federation of Sportsmen's Clubs; and many other organizations and individuals by vigorously protesting the proposed violation by the United States of the Treaty of Canandaigua of 1794 without consent of the Seneca Nation of Indians by proceeding with its plan to wrongfully, and dictatorially take the treaty lands of the Senecas for power and reservoir purposes; be it further

Resolved, That the American people be urged to remind their Representatives in Congress of one of our fundamental American principles—might does not make right; treaty guaranties are not to be ignored by unilateral action.

RESOLUTION NO. 53—NORTHERN CHEYENNE TRIBE

Whereas the continuity of the Northern Cheyenne Reservation in the State of Montana is threatened by reason of supervised land sales brought about by the action of the Secretary of Interior: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla, October 28 to November 1, 1957, That it supports and pledges all possible assistance to the Northern Cheyenne Tribe in its efforts to retain its land base especially in its current efforts at tribal purchase of restricted trust lands which are being offered for disposition through supervised land sales.

RESOLUTION NO. 54—NCAI ORGANIZATION, APPRECIATION OF TRUST SUPPORT

Whereas the National Congress of American Indians is a beneficiary of the Robert Marshall Civil Liberties Trust; and

Whereas the grant made each year is of inestimable value to the national congress in these early years of its organization as a national body representative of Indians and Indian tribes; and

Whereas the process of organization should be maintained at its present healthy rate, made possible only by the grant, until all Indians and Indian tribes are reached by the widening influence of the national congress and join it in membership in larger numbers than presently so that eventually Indian problems will be resolved and the destiny of Indians will be determined by the Indians themselves; and

Whereas the process will be greatly accelerated by continuance of the grant: Now, therefore, be it

Resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, extend its most heartfelt thanks to the Robert Marshall Civil Liberties Trust, assure it that the grant is accomplishing more than can be estimated from the historic promise of the present, and request that the grant be continued in the same amount as heretofore given and under the same terms.

RESOLUTION NO. 55—NCAI ORGANIZATION, FINANCIAL SUPPORT

Whereas the National Congress of American Indians is organized to render services to members on legislative and other matters in accordance with its constitution; and

Whereas in partial support of these services the Robert Marshall Civil Liberties Trust contributed the grant of $14,998.29 for the year ending December 31, 1956, and shall contribute an amount up to $15,000 for the present calendar year 1957, on a dollar-for-dollar matching basis; and

Whereas the Robert Marshall Civil Liberties Trust has served notice that insofar as present considerations are concerned, it will contribute the sum of $10,000 for the calendar year 1958 and $5,000 for the succeeding year, respectively on a 2-to-1 and 3-to-1 matching basis; and

Whereas as a consequence, it will be necessary for the national congress to raise the sum of $20,000 during the coming year since the trust support, aforesaid, is necessary at this time for the continued existence of the national congress; and

Whereas with increase of membership from 40 tribes in 1956 to 62 tribes to date, with other tribes expected to join in the coming year, will necessitate increased expenditures for administration and services; and

Whereas for minimal services and in consideration of pending legislation and other matters of paramount concern to member-tribes it is estimated that a budget of at least $38,000 is required for the calendar year 1958: Now, therefore, be it

Resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, urgently calls upon its members to contribute not only the sums to be assessed in accordance with ability to pay as gaged by the amount of present dues paid, as for example, $50 to be assessed where present dues are $250, but such additional sums as each tribe may find itself able to pay on the basis of its income and commitments; that each tribe be called upon to secure from its rolls and in its community at least the number of additional individual members to be fixed as its quota; and that the executive director of the National Congress of American Indians be directed to notify each tribe of the assessment and membership quota determined, as aforesaid, in ample time before the commencement of the calendar year 1958.

RESOLUTION NO. 56—NCAI ORGANIZATION, OKLAHOMA-KANSAS PROGRAM

Whereas the National Congress of American Indians has for its purposes: To secure to ourselves and our descendants the rights and benefits to which we are entitled under the laws of the United States, the several States thereof, and the Territory of Alaska; to enlighten the public toward a better understanding of the Indian race; to preserve Indian cultural values; to seek an equitable adjustment of tribal affairs; to secure and to preserve rights under Indian treaties or agreements with the United States; and otherwise to promote the common welfare of the American Indians; and

Whereas the State of Oklahoma is comprised of approximately one-third of the total United States Indian population, consisting of 33 tribes and with approximately 1,300,000 acres of land still in trust by the United States Government; and

Whereas the State of Kansas also has subsatntial Indian area and population; and

Whereas in order for the National Congress of American Indians to gain the active support of the Oklahoma and Kansas Indians, it is necessary to adopt an Oklahoma-Kansas program: Now, therefore, be it

Resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, instructs the executive director to study and determine the feasibility of the recommendation to appoint a field representative for the States of Oklahoma and Kansas, subject to such safeguards, regulations, and procedures as may be established by the executive council, whose primary duty will be to take steps to secure membership, both tribally and individually, of Indians in his assigned area and to carry out such duties as may be assigned by the national headquarters.

RESOLUTION NO. 57—NCAI ORGANIZATION, NCAI HISTORIAN

Whereas the National Congress of American Indians has been in existence for 14 years, and during these years has made remarkable progress in achieving its original aims and purposes; and

Whereas in carrying out said program certain rights and justice for the American Indian have been recognized and secured; and

Whereas these achievements should be recorded and perpetuated in permanent form: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, That the president of NCAI be authorized and directed to appoint an official historian to report the

achievements of the NCAI for the past 14 years and each year hereafter; be it further

Resolved, That said record of achievements be presented to the Congress of the United States to be incorporated in the Congressional Record.

RESOLUTION NO. 58—APPRECIATION, CITIZENS OF CLAREMORE

Whereas several groups and agencies in the State of Oklahoma have by their cooperation and assistance made the 14th Annual Convention of the NCAI one of the most successful ever held: and

Whereas the spirit of friendliness and congeniality of the people of the State of Oklahoma has been much enjoyed and appreciated by the delegates and visitors to the NCAI convention; and

Whereas the National Congress of American Indians is desirous of expressing its sincere appreciation to these groups: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, That the sincere thanks and appreciation of this organization be and are hereby extended to the Osage Tribe, the city of Claremore, the State of Oklahoma (especially the State resources and planning board) and the following:

Bacone College, administrative, art and music departments, Muskogee; Christine's Flower Shop, Claremore; Claremore Chamber of Commerce; Claremore hotels and motels; Dog Iron Club, club; Indian Affairs Council, Tulsa; Newspapers of Claremore, Tulsa, and Oklahoma City; Oklahoma Military Academy, president, staff, and student body, Claremore; Phillips Petroleum Co., Bartlesville; Pocahontas Club, Claremore; Will Rogers Hotel; and the Protestant and Catholic churches of Claremore, Okla.

RESOLUTION NO. 59—APPRECIATION, DR. PASCHAL SHERMAN

Whereas, Dr. Paschal Sherman, chairman of the fiscal and administrative subcommittee of the National Congress of American Indians, has so unselfishly devoted his time and abilities to the NCAI; and

Whereas, during the illness and absence of Mrs. Helen L. Peterson, our executive director, Dr. Paschal Sherman, with great sacrifice of his own personal interests, devoted much time and attention to the operation of the Washington Office of the NCAI for a period of 2 months: Now, therefore, be it

Resolved, That the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, expresses its heartfelt appreciation to Dr. Paschal Sherman.

RESOLUTION NO. 60—APPRECIATION, MR. KURT A. SMITH

Whereas, Kurt A. Smith, manager of the Sheraton-Park Hotel in Washington, D. C., has extended extraordinary courtesies to Indian delegates and assistance to the National Congress of American Indians: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, That Kurt A. Smith be informed of the deep appreciation of the members and officers of National Congress of American Indians for his generous help, his concern, and his esteemed friendship.

RESOLUTION NO. 61—WILL ROGERS

Whereas the National Congress of American Indians is convening in the home county of Will Rogers, Sr.; and

Whereas Will Rogers was one of the world's great humanitarians and has brought honor and distinction not only to the Indian race but to all people of the United States; and

Whereas his homely philosophy and expressions of good will brought peace and consolation to people everywhere; and

Whereas we deem him a worthy candidate for the National Hall of Fame for Famous American Indians: Now, therefore, be it

Resolved by the National Congress of American Indians in convention assembled in Claremore, Okla., October 28 to November 1, 1957, That the board of directors of the National Hall of Fame for Famous American Indians be and they are hereby requested and urged to place the statue of Will Rogers in the Hall of Fame for Famous American Indians, Anadarko, Okla.

I hereby certify that the foregoing 61 resolutions were duly considered and passed by the 14th Annual Convention, National Congress of American Indians, October 28–November 1, 1957.

Senator HILL. Senator Smith, any questions?

Senator SMITH. Not any questions.

Senator HILL. Mrs. Peterson, we certainly want to thank you. You, like the others, have been most helpful and have brought us a most informative statement. We are most grateful to you.

Mrs. PETERSON. Thank you very much indeed.

LETTER FROM DR. CARL MUSCHENHEIM

Senator HILL. I have received a letter from Dr. Carl Muschenheim, chairman, National Committee on Indian Health, Association on American Indian Affairs, New York, urging this committee to lend its support toward expediting completion of necessary construction projects already authorized for the Indian Health program. Dr. Muschenheim's letter will be made a part of the record at this point.

(The letter referred to follows:)

ASSOCIATION ON AMERICAN INDIAN AFFAIRS, INC.,
New York, N. Y., February 12, 1958.

Hon. LISTER HILL,
Chairman, Senate Appropriations Subcommittee on Labor, Health, Education, and Welfare, Senate Office Building, Washington, D. C.

DEAR SENATOR HILL: The Association on American Indian Affairs has for some time been concerned over the lack of progress being made by the United States Public Health Service's Division of Indian Health in the construction of Indian health facilities. We are of the opinion that significant advances in health program activities have resulted since this program was transferred from the Department of the Interior and, consequently, are somewhat at a loss to understand the somewhat incongruous situation where one phase of an operating health entity exhibits good to excellent results, whereas the other shows practically no results at all.

We believe the Congress is to be congratulated on its farsighted past action in providing significantly increased appropriations designed to provide desperately needed new and improved health facilities for American Indians. We were encouraged to note that your committee in its report accompanying H. R. 6287 last June, called specific attention to this situation calling for "* * * the Department to proceed immediately with resumption of work already authorized by the Congress." It appears at this writing that the requested actions have not been taken.

As stated in your report, the need is unquestioned and great, and we agree that authorized projects must go forward. Our association would appreciate any appropriate action which your committee could take in order that these projects will be completed and services made available to our Indian citizens.

Respectfully yours,

CARL MUSCHENHEIM, M. D., *Chairman.*

LETTER FROM NATIONAL TUBERCULOSIS ASSOCIATION

Senator HILL. The National Tuberculosis Association has also written the committee concerning the delays, concerning which we have already had considerable testimony, in getting some of the most

urgently needed hospitals under construction, and for which the Congress has appropriated funds some 2 years or more ago. The association's letter will appear at this point in the record.

(The letter referred to follows:)

NATIONAL TUBERCULOSIS ASSOCIATION,
New York, N. Y., February 20, 1958.

Hon. LISTER HILL,
Chairman, Senate Appropriations Subcommittee on Labor-HEW,
United States Capitol, Washington, D. C.

DEAR SENATOR HILL: I have been requested to bring to your attention a matter which, in the opinion of the committee on cooperation with Federal agencies of the National Tuberculosis Association, merits special consideration. The National Tuberculosis Association and our committee have been deeply interested for a number of years in the status of the health of the American Indians. As you are aware, the tuberculosis morbidity and mortality among these people have been inordinately high, particularly as compared with the corresponding rates for the United States population.

The particular matter to which I wish to refer is the provision for additional hospital facilities for the care of the American Indians. Funds have been appropriated by the Congress for some 2 or 3 years for the construction of hospitals at Shiprock, Arig., and Gallup, N. Mex., for the Navaho; at Sells, Ariz., for the Papago; and at Kotzebue, Alaska, for the natives of that Territory.

Our committee is somewhat mystified by the fact that at last report, the Public Health Service had not begun construction at any of these sites as yet. Our committee noticed in the report authored by your committee which accompanied H. R. 6287, making appropriations for fiscal year 1958 for the Department of Health, Education, and Welfare, on page 18, that you expected the Department to proceed immediately with the resumption of that work which was authorized by the Congress. I wish to inform you that our committee is in complete agreement that this need is unquestionably great and express to you the hope that you and your committee will find some method by which the construction of these facilities will proceed with a minimum of further delay.

Knowing of your interest in health and your fervent attention in matters such as this, I wish to express to you in advance the appreciation of our committee and of the National Tuberculosis Association.

Respectfully yours,

JOHN C. HARRISON,
Chairman, Committee on Cooperation with Federal Agencies.

Senator HILL. George J. Hecht, chairman of the American Parents Committee and publisher of Parents' Magazine.

CHILDREN'S PROGRAMS

THE AMERICAN PARENTS COMMITTEE, INC.

STATEMENT OF GEORGE J. HECHT, CHAIRMAN, ALSO PUBLISHER, PARENTS' MAGAZINE

INADEQUACY OF FUNDS FOR CHILDREN'S SERVICES

Mr. HECHT. I am grateful for the opportunity to appear before you once again. I always feel that this is one committee of the Congress where there is not need to talk about the high dividends that will result from the investments made in the health, education, and welfare of children.

You have demonstrated by your actions in the past that you know the importance of taking care of children's needs.

What I have to say today is not new and startling—but it is so true that I wish we could find a way of shouting it from the housetops. The truth of the matter is this—the amount of money we are spending

to provide services for children is not keeping up with the increase in the number of children and the increase in costs. This is true in almost every field—you have a roomful of witnesses who are here to testify to that fact.

SPECIFIC REQUESTS

The three requests I have to make are:

1. We hope you will not cut any of the appropriations affecting children below the amount voted by the House.

2. We hope you will increase the appropriation for the Office of Education to the amount recommended in the President's budget.

3. We hope you will increase the appropriation for the grant-in-aid for Child Welfare Services to the $12 million authorized by law.

RESEARCH NEEDED ON EDUCATION OF THE GIFTED CHILD

I will say only a few words about the education appropriation because I think the needs of education are familiar to the members of this committee. As you know, the House allowed the Office of Education $800,000 more than it had last year, but $150,000 less than the budget recommendation.

The House emphasized the need for continued research in the education of the mentally retarded and children with speech and hearing defects.

We agree that this field is very important. However, we think the events of the last few months have revealed a need which may be even more urgent—that is the need for better techniques for identifying the gifted child early, and better methods of developing the potential ability of that child.

That problem ought to have a place of high priority in the Office of Education. We hope, therefore, the Senate will appropriate the $150,000 extra and will emphasize that it expects more progress in discovering methods to develop the child with exceptional ability.

The budget request did not recommend any increase for the Federal grant-in-aid for child health services. The House, however, in response to testimony on need, increased the present $10 million to $11 million. We hope the Senate will put in the extra million so that the children of the 48 States will benefit from the $12 million maximum appropriation for this important service. The increase is needed primarily for more workers to help troubled, neglected, and homeless children.

Through your leadership small increases were voted for this program during the past two sessions. The extra money was taken up quickly by the States, and most of it was used, I am told, to employ more workers and train others.

RESULTS DUE TO ADDED PERSONNEL

I would like to give two examples where these additional workers have produced good results.

Example No. 1—More than 60 percent of adoptions are now made through qualified agencies. This means that the black market in babies has been cut by about 10 to 15 percent. However, a group of attorneys, called in to meet with the Children's Bureau only 10 days

ago, agreed that the black and gray market in babies can never be wiped out until adequate services for unmarried mothers exists in every community.

The services they are talking about are social welfare services; because, as they said, it is not the function of the attorney to arrange the placement of a child, but the function of the social agency. When we remember that there is not a single public child welfare worker in one-half the counties of the country, we realize how much extra money could be put to good use.

Example No. 2—Has to do with the problem of finding homes for the "hard-to-place" children. These are the children who are physically handicapped, mentally retarded, older, or who have some other condition that makes them less desirable in a home. It costs twice as much in time and effort to find homes for these children.

In Colorado there were 51 such children for whom homes seemed not to be available. More workers were put on the job. Part of the stepped-up effort was a series of well-planned newspaper articles on some of the children.

As a result, 100 applications and 200 telephone calls were received and suitable homes were soon available for the 51 children.

HOMEMAKER SERVICES

Many of the States are recognizing more and more the value of homemaker services. Under this program a trained homemaker is sent into a home to help care for the family while the mother is ill, hospitalized, or otherwise unable to do her job. Under this arrangement children are cared for in their own homes who might otherwise be hungry and neglected. Social workers are enthusiastic about the results of homemaker services, and if more money were available, it is reasonable to expect it would spread rapidly.

In closing, we hope that for fiscal 1959 the full $12 million may be made available to the States. In the face of current unemployment—which increases the problems of children—in the face of increasing number of children and the increasing cost of helping them, the additional $2 million will at least enable the States to hold the line in child welfare services.

The three requests I am making on behalf of the American Parents Committee do not represent, by any means, all that we would like to see in appropriations for children, but they are what we believe to be absolutely essential. We hope you will give serious consideration to our request.

Thank you.

May I add that I have been authorized by the Child Welfare League of America to represent them in putting in a plea for the $12 million appropriation. The executive secretary has written you a letter, Senator Hill, and he has asked me to have you put this letter in the record.

Senator HILL. We will put the letter in the record following your remarks.

Any questions, Senator Smith?

Senator SMITH. Not any questions, Senator.

Senator HILL. You are an old friend of this committee, Mr. Hecht. You have been with us on a number of occasions. You have always been very helpful and very fine, just as you have been this morning. We want to thank you and express our deep appreciation.

(The information referred to follows:)

CHILD WELFARE LEAGUE OF AMERICA, INC.,
New York, N. Y., May 8, 1958.

Mr. GEORGE J. HECHT,
Chairman, The American Parents Committee, Inc.,
New York, N. Y.

DEAR GEORGE: We would appreciate it very much if you would represent the league at the forthcoming hearings on the Child Welfare Services grants-in-aid program. You are free to state that the Child Welfare League of America fully endorses an increase in the appropriation to the full $12 million authorized. I am enclosing a copy of the letter written to Senator Hill, chairman of the committee in question.

Sincerely yours,

JOSEPH H. REID, *Executive Director.*

CHILD WELFARE LEAGUE OF AMERICA, INC.,
New York, N. Y., May 8, 1958.

Hon. LISTER HILL,
United States Senate,
Washington, D. C.

DEAR SENATOR HILL: The Child Welfare League of America wishes to urge favorable congressional action to bring the appropriation for the Child Welfare Services grants-in-aid program to the full authorized amount of $12 million.

The grants-in-aid program has been of immeasurable assistance throughout the country. The training of a significant proportion of child welfare workers in rural areas was financed through this fund. Demonstrations of effective child welfare service in almost every State has resulted in increased appropriations of local and State funds to assist children. It has been truly a program that has aided States to help themselves. There are still, however, thousands of children who will grow up to be dependent or delinquent adults because effective services are not available to them.

As a national federation of 240 private and public child welfare agencies, of all religious faiths, the league strongly endorses an increased appropriation as being an effective means of strengthening democracy.

Sincerely yours,

JOSEPH H. REID, *Executive Director.*

LETTER TO SENATOR SYMINGTON

Senator HILL. Senator Symington has referred to this committee a letter addressed to him from Mr. Charles E. Farris, executive director, Girls' Home, St. Louis, Mo., concerning the need for additional funds for child welfare services. These letters will appear at this point in the record.

(The letters referred to follow:)

UNITED STATES SENATE,
COMMITTEE ON ARMED SERVICES,
April 19, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Departments of Labor, and Health, Education and Welfare and Related Agencies of the Senate Appropriations Committee, United States Senate, Washington, D. C.

DEAR MR. CHAIRMAN: The attached letter, dated April 17, from Mr. Charles E. Farris, executive director, Girls' Home, St. Louis, Mo., speaks for itself with respect to the appropriation on Federal aid for child welfare services.

Your consideration of this recommendation will be appreciated.

Sincerely,

STUART SYMINGTON.

Attachment.

THE GIRLS' HOME,
ST. LOUIS, MO., *April 17, 1958.*

SENATOR STUART SYMINGTON,
Care of Senate Office Building,
Washington, D. C.

DEAR SIR: This is to express my concern regarding the pending legislation on Federal aid for child welfare services. It is my feeling that the $11 million recently voted by the House of Representatives is inadequate. Twelve million dollars would insure proper financial support for this urgent service.

As the executive director of Girls' Home, a home for dependent and neglected girls, I am in close contact with the amount, or rather lack of amount of child welfare services Missouri is able to provide. With the expanding children's population, we in the group child care field have been forced to become more and more selective in which child we accept for care. This, unfortunately, means greater pressure on already limited State child welfare services, and without adequate additional funds they cannot stem the tide of neglect, dependency, and delinquency facing the children of Missouri.

Any consideration you can give to this matter will be greatly appreciated.

Very truly yours,

CHARLES E. FARRIS, *Executive Director.*

LETTER FROM SENATOR GREEN

Senator HILL. Senator Green, of Rhode Island, has written to Senator Hayden, chairman of this committee, transmitting a copy of a letter to Senator Green from Mr. Lawrence C. Cole, administrator, Division of Child Welfare Services, Department of Social Welfare, for the State of Rhode Island, urging this committee to approve an appropriation of $12 million, the full amount of the authorization, for child welfare services for fiscal year 1959. These letters will appear at this point in the record.

(The letters referred to follow:)

UNITED STATES SENATE,
COMMITTEE ON FOREIGN RELATIONS,
April 25, 1958.

Hon. CARL HAYDEN,
Chairman, Senate Committee on Appropriations,
Washington, D. C.

DEAR MR. CHAIRMAN: Transmitted herewith is a self-explanatory copy of a letter from Lawrence C. Cole, administrator of the Division of Child Welfare Services, Department of Social Welfare for the State of Rhode Island.

You will note that Mr. Cole is particularly interested in the item in the Labor-HEW appropriation bill covering grants to States for child welfare services.

I would like to go on record in support of Mr. Cole's recommendation that the item in question be raised to $12 million. Further than that, I would highly appreciate your having Mr. Cole's letter incorporated in the record of the hearings on the Labor-HEW appropriation bill.

Yours sincerely,

THEODORE FRANCIS GREEN.

Enclosure (1).

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS,
DEPARTMENT OF SOCIAL WELFARE,
CHILD WELFARE SERVICES,
Providence, R. I., April 22, 1958.

Senator THEODORE FRANCIS GREEN,
Senate Office Building, Washington, D. C.

DEAR SENATOR GREEN: We understand there is a strong possibility that Congress might be willing to appropriate the full $12 million at present authorized for grants to States for child-welfare services. Although the authorization, we understand, has been $12 million, to date the appropriations have never been made to the full amount. We, accordingly, wish to register with

you, along with many other local individuals and groups as well as certain national organizations, the hope that you would be willing to assist in securing the full amount authorized on the basis of the needs of children.

The reason we are requesting your help in securing at least the full amount of the authorization is the fact that children's needs in Rhode Island and in the country are not being met by the current $8,361,000 appropriation, and that we believe the full $12 million authorized can be justified, even in a recession year.

The Federal child welfare services grant to Rhode Island in 1958 of $47,992 was budgeted as follows:

(*a*) Training of social workers: Training of new staff so essential for modern child care was provided through (1) the salary of a training supervisor, (2) 4 short-term training positions of a few months each, and (3) 3 scholarship grants for students in a school of social work earning their master's degree.

(*b*) The salaries of 5 social workers who provide 9 rural towns a protective and preventive service. This is the child-welfare service available, as private agencies do not cover these rural areas.

Absorbing in the Federal funds to match the increased State social-work salaries has wiped out leeway and made even the current budget extremely precarious. More Federal funds are needed.

Not all children in this country or this State have adequate parents or the kind of environment which helps them to develop normally. Not so many children as previously needed public care because of physical or medical neglect, but many today are living in homes torn by emotional or economic strife, frequently with one or both parents absent through divorce, sickness, or other causes. In Rhode Island, there are, accordingly, many real needs for child welfare that cannot be met by current funds available.

Rhode Island Child Welfare Services, the authority in Rhode Island for the expenditure of Federal child-welfare services funds, is a statewide child-care agency giving direct care to children needing substitute care. In addition, the agency carries the broader responsibility of child-welfare community planning to secure for all children in the State the necessary services essential for proper development. Due to community-chest failures, endowment-fund difficulties, etc., the voluntary agencies are finding it impossible to expand or even to continue their share of present child-care community responsibilities. Thus, it becomes necessary for the public agency to assume additional services and functions if children's essential needs are to be met.

Rhode Island has recognized the need of a family for every child, either by protecting his security within his own famliy through service to them, or through adoption or other foster-home placement as a substitute for the natural family. Adoption placement can be most effective if a child joins the new family as early as possible. This implies a careful evaluation, based on sound knowledge, using all the skills and scientific knowldege of all disciplines to determine the potentialities within the own family. Yet, today, many children are suffering because of inadequate services, both in social service and in adequate facilities.

Rhode Island, over a period of 35 years, has administered a direct child-care public program on a statewide basis, providing foster-care services to children in need for an indeterminate period. However, this program, which was created so many years ago, does not meet today's demands for specialized foster-care service and facilities which today are being made upon it. At the present time, the kinds of situations involving children needing foster care and the concept of individual treatment and planning for these children are radically different than they were some years ago. Long-term substitute care, continued and complete separation of children from natural families with only a foster family as a substitute, is not today considered desirable. Intensive service to the child and family to help them to live with each other and to meet the demands of present-day society is of greater value. The foster-care program in Rhode Island has not expanded sufficiently to provide the necessary casework service and facilities for those children in need of individualized services away from their own family for a period of time.

In Rhode Island, foster-care services and facilities are limited by lack of casework positions, lack of trained and qualified staffs with low salaries as a contributing factor, and by lack of specialized settings for children needing foster care of a special nature.

The public child-placing program, using both institutional and foster-home care, is still attempting to meet the needs and demands of each child needing

foster care. However, those children with severe or acute mental handicaps, the emotionally damaged child, the child with severe behavior problems, the adolescent needing group living, the retarded child who could benefit from a foster-family setting, and the Negro child needing both boarding and adoptive placements are not receiving the kind of service they so desperately need.

Since it is recognized and accepted in the community that adequate facilities are not available, children who are in need of more than foster-family care, per se, or temporary group living, as provided through the public children's institution for dependent and neglected children, are not referred. The proper agencies fail to refer because they think referral is useless in view of the lack of resources to meet the need. For instance, hospitals are forced to make their own plans for emergency care of children of mothers hospitalized, because of the difficulty of getting acceptance for placement by the private agencies responsible in the community division of labor. The juvenile court is faced with the need for detention facilities and proper emergency planning frequently even on children known to the private agencies for months.

The following are more of the groups needing service not, today, adequately met in Rhode Island:

1. There are Negro children needing adoptive homes and boarding homes but who remain in group care. Others, of necessity, are placed in substandard foster boarding situations. These facts are true, in spite of intensive efforts of the public home-finding service to locate homes within the State or elsewhere in the country, and the use of special appeals, newspapers, radio, community committees, etc. Many of these same problems apply to other minority groups.

2. There is the older child, other than the Negro group, in need of adpotion placement who grows up in boarding care because of the smaller demand for the older child in adoption and other innate problems. The inadequacy of service while young prevents the expansion of the adoption program with the necessary intensive work to interest families and educate them to the potential of an older child as a satisfying adoptive child.

3. There is the adolescent needing a small group setting, but who continues to live through a series of unsatisfactory foster-family experiences. The need is for small, specialized, group homes for school boys and girls, for low-grade intellectuals who might be helped to be self-supporting in the community.

4. There is the mental-health group, including the seriously damaged child who presents severe behavior problems or symptoms of real emotional disturbance who is unacceptable to the average foster family. He still needs either a specialized foster family or a period of treatment in an appropriate treatment center.

5. A larger number of children should have adoption placement, if sufficient service were available, to truly evaluate the potential within the child's natural family, the desirability of final separation, sufficient home-finding time to work with prospective adoptive families, and to give sufficient service to the child in accepting adoption are not moving toward early adoption, but remain in boarding care.

6. Illegitimate children comprise 26 percent of the entire caseload of public foster care in Rhode Island. It is recognized that only a small percentage of this group can grow up comfortably within their natural family unit because of the absence of the normal family relationships for them. It is also recognized that in statewide Rhode Island this group of children is not receiving the service necessary from public and private agencies to create for them the maximum security which should be available for their future citizenship.

7. Children over 16: A recent analysis of the children remaining in the care and custody of the public child-care program shows that 360 children over 16 years of age are receiving child-welfare services continued service; 146 of these live in boarding homes. Foster boarding placement of the adolescent is, in most instances, an unsatisfactory experience. Long-term separation from natural families, if an adoptive family while young is not substituted, in an overwhelming number of cases results in poor social adjustment and resulting community problems for those adolescents needing it. Group facilities for older children are completely lacking in Rhode Island, except for one small, sectarian facility which can accommodate only a limited number. Small group facilities for working girls, for working boys, and for children with special problems are particularly needed.

8. When foster care is not available, children may remain long periods in institutional settings to their detriment. A group of the hard-to-place children

remain in the children's center and other institutions. There have been instances of children remaining in hospitals, or even being placed in a hospital setting, because foster care cannot be planned for them immediately. The notable example of this occurred when infectious hepatitis began to assume an epidemic proportion in this State. The lack of foster-care planning for children of parents ill with infectious hepatitis proved a lack of specialized homes who could handle the infectious nature of this disease as well as the limited number of available homes not already caring for other foster children.

9. There is evidence, also, that children are living in damaging home situations, because of the lack of adequate coverage in the protective and preventive field. Due to inadequate services in the protective and preventive field, there is evidence that children are living in damaging home situations or become delinquent because service is not given to them sufficiently early.

The outstanding limitations for adequate service are the following:

1. Shortage of trained personnel in number and in quality might be listed as the most outstanding limitation of foster-care service in Rhode Island. Unless there is sufficient trained personnel to work within specialized settings, as well as to do casework in the preventive aspect of work with younger children, the success of any program is seriously questioned. In Rhode Island large caseloads are assigned to unqualified workers; therefore, the concept of treating the individual child, meeting his special individual needs, which encompasses also work with parents of children in substitute care, which is accepted, is not carried out in practice and service.

2. Salaries are entirely too low for qualified degree social workers compared to other States. No credit financially is given in Rhode Island for 1 year, 2 years, or a thesis qualification, which is most desirable, like schoolteachers. These limitations vitally affect the securing of adequate supervisory staff, who in turn should require a higher salary scale.

3. There is need for the development of an adequate child-welfare services intake program. At the present time, because staff is limited, an adequate intake staff has not been developed. Children are received through court commitment with insufficient and inadequate service available to them previous to acceptance. Increase in service to children in their own homes would decrease the incident of the breakdown of family units.

4. Inability to obtain additional casework positions to create sufficient service (*a*) in adoption placements and (*b*) the home-finding unit.

5. Increased home-finding service to recruit and develop foster homes of all types for specialized service to children is needed. Group home development is particularly an outstanding need.

CONCLUSION

May we reiterate the fact that Federal rural grants have been the lifeblood in leadership and training in the Rhode Island child-welfare services program. Although small in amount, it has sparked progressive standards and the development of whatever good service has been given children under public care. Although it is agreed some realinement with the private agency seems desirable, every child-care agency in Rhode Island would agree that the child-welfare services appropriations for both public and private agencies need to be radically expanded to meet the growing needs of Rhode Island's children. Most public child-care programs in the country have had a material increase annually in total appropriation each of the last 5 years. On the other hand, the total spent in Rhode Island has been practically static, and whatever increases have occurred have primarily been due to the leadership possible through the Federal child-welfare services grants.

We accordingly hope the above material presented would prove the extreme need and desiraiblity of more Federal funds on a program which could be used to good avail in many areas for the improvement of public standards of care in the State of Rhode Island.

We would be glad to supply any additional material if requested.

Sincerely yours,

LAWRENCE C. COLE, *Administrator.*

LETTER TO SENATOR JOHNSON

Senator HILL. Miss Lou-Eva Longan, executive director, the Children's Bureau, Dallas, Tex., has forwarded a copy of a letter she wrote

to Senator Lyndon Johnson concerning the need for additional funds for child-welfare services. Miss Longan's letters will be inserted in the record at this point.

(The letters referred to follow:)

THE CHILDREN'S BUREAU, INC.,
Dallas, Tex., April 18, 1958.

Senator LISTER HILL,
Senate Office Building, Washington, D. C.

DEAR SENATOR HILL: I have just written our Texas Senator, Hon. Lyndon B. Johnson, to the effect that it is my hope he will see fit to approve the $11 million voted by the House of Representatives for Federal aid for child welfare services in the various States, and that he also may see fit to put in a "plug" for $12 million instead of the $11 million voted by the House. A copy of my letter to Senator Johnson is herewith attached, and I hope that you will give this matter your own consideration and your sincere backing. I would like to request that this letter be incorporated into the Record of the hearing on this matter.

Appreciating your courtesy, I am,

Very sincerely,

LOU-EVA LONGAN,
Executive Director.

THE CHILDREN'S BUREAU, INC.,
Dallas, Tex., April 18, 1958.

Senator LYNDON B. JOHNSON,
Senate Office Building, Washington, D. C.

DEAR SENATOR JOHNSON: I am writing you as executive director of the Children's Bureau, one of the community chest agencies in Dallas, Tex., relative to the appropriation for the coming fiscal year to cover the needs of child welfare services in the different States. Actually, Texas, as you know, spends less in both its own money and in the matching Federal funds for these services than many States for the reason that the State legislature allocates less than do many States with fewer children to be served. This State certainly does need to spend what is now allocated for this purpose, and more. I know that the House of Representatives has voted to increase the appropriation for the coming fiscal year to $11 million for these countrywide services. Those of us who are on the firing line in both the State and local child welfare agencies, and the private programs are affected by limited services on the public level I can assure you, are hoping that the Senate may see fit to increase this appropriation from $11 million to $12 million.

I trust you will do all within your power to see that at least the $11 million is granted and put in "a plug" for the $12 million needed.

I am writing Senator Lister Hill to this effect, asking that he insert my letter in the record of the hearing. It is my understanding that Senator Hill is chairman of the Senate Appropriations subcommittee in charge of this matter.

The foregoing letter is written by me personally but it does represent the thinking of our agency staff and board of directors.

Thank you for what you may be able to do in this regard.

Sincerely,

LOU-EVA LONGAN,
Executive Director.

Senator HILL. Mr. William Norwood, Jr.

Mr. NORWOOD. Yes, sir.

Senator HILL. Suppose you introduce, for the record, the other gentlemen with you.

Mr. NORWOOD. Mr. Chairman, Senator Smith, I am accompanied by H. A. Weems of Alabama of the administrative branch committee of the Interstate Conference of Employment Security Agencies and Mr. T. Marks Huff, of Mississippi, chairman of the legislative committee.

Senator HILL. We are glad to have all three of you gentlemen with us.

Employment Security Program

Interstate Conference of Employment Security Agencies

STATEMENT OF WILLIAM U. NORWOOD, JR., PRESIDENT, ACCOMPANIED BY H. R. WEEMS AND I. MARKS HUFF

BUDGET ESTIMATE AND HOUSE ACTION

Mr. Norwood. I am director of the Florida State employment service of the Florida Industrial Commission, and am president of the Interstate Conference of Employment Security Agencies. My appearance here is in behalf of the administrators of the employment-security programs in all States. I would like to thank you very much for giving me the opportunity to speak before this committee.

The amount contained in the President's budget for grants to the States for administration of the unemployment compensation and employment service programs in the fiscal year 1959 was $329,300,000. This amount, which includes a $10 million contingency fund, is based an assumption of an average level of 2 million insured unemployment in 1959.

The House reduced the request by $24,300,000. We ask that this amount be restored, because we are convinced the entire $329,300,000 will be needed to finance the administrative costs of these programs at the assumed workload level in 1959.

Moreover, insured unemployment in all probability will exceed the assumed 2 million weekly rate, and requests for supplemental appropriations are inevitable. Any reduction in the initial appropriation ultimately will have to be restored through supplemental requests. We submit that no purpose is served by reducing the amount of the original request and thereby increasing the amount of supplemental requests.

IMPACT OF WORKLOAD

Mr. Chairman, it has been stated that the impact of workload volume should cause a savings in unit costs. Recent State experience, which reflects some degree of absorption, is cited as evidence of this mistaken assumption. It is true in the present situation that the States have made emergency and temporary adjustments which have resulted in some artificially depressed units of cost.

It is equally obvious that the full effect of this economic downturn was difficult to assess in its beginning stages. There was a significant lag in "staffing up." This was due, first to an understandable reluctance on the part of State administrators to hire additional personnel until the economic picture could be more completely judged; and, second, to the seemingly unavoidable delays inherent in merit system recruitment and appointment.

Then, too, the impact of spiralling claims loads was most unevenly distributed throughout the country, and physical space limitations, which are only now being effectively relieved, had to be reckoned with.

UNCOMPENSATED OVERTIME

In the pattern of the last few months there also has been a very substantial amount of uncompensated overtime, plus a deferment both of

compensatory time off and the taking of annual leave. In part, the slack was taken up by diversion of employment service staff in order to meet the impact of the claims workloads. While this is highly undesirable, it is almost unavoidable in the short run.

During fiscal year 1959, we expect that these factors will have been overcome. The enforced speedup and corner-cutting will have been eliminated. The States will have fully staffed up for the job to be done. Space limitations will have been corrected. In the interest of efficiency and equity, employees must be allowed to use accrued leave when due, and uncompensated overtime must be eliminated.

The diversion of employment service staff, which occurred in fiscal 1958, must be avoided in 1959 if we are to afford to applicants the type of placement service to which they are entitled. It is clear that particular effort will be needed in behalf of veterans, older workers, youth, and the physically handicapped under the present labor market conditions.

PROBLEMS OF REDUCING STAFF

In addition, there is a basic factor which apparently has not been given sufficient consideration. Past experience shows that there is an inevitable lag in reducing staff as the claims load diminishes. We have pointed out that there was a lag in gearing employment security operations to the rapid rise in claims during the fall and winter of 1958.

We are, of course, anticipating that some time during fiscal year 1959 conditions will improve and the volume of claims will drop. As such occurs, the same factors which motivated State administrators to exercise a reasonable degree of prudence in "staffing up" will dictate a cautious attitude toward employee reduction.

Moreover, the process of separating employees involves delays because of notification requirements, application of reduction-in-force formulas, and similar merit system provisions. Separations also normally involve extra costs because of terminal-leave payments to which employees are entitled.

The employment security program is one of service; that is, dealing with people. We are not engaged in the mass production of manufactured units, with associated volume cost connotations. Rather, we are conscientiously, and I honestly believe, successfully, operating a nationwide employment security system in an effective and efficient manner, while at the same time preserving the integrity of the program by guarding against improper payments of benefits.

The effect of volume on our operations has been exaggerated, and perhaps misunderstood. I am convinced that the degree to which this will be a factor in 1959 is insignificant. I foresee little or no so-called "absorption" of costs in 1959 in employment security operations.

FUND RESTORATION NEEDED BY STATES

The States genuinely need to have restored for personal services, based on weekly insured unemployment of 2 million, the full amount of the $20,227,000 reduction made by the House in order to bring operations in 1959 to a level of performance which would be satisfactory to the Congress and the public which we serve.

In addition, the States critically need restoration of $2,786,000 for nonpersonal services, which is the amount reduced by the House. For years, the States have been seriously underfinanced in their nonpersonal services costs.

Indeed, this circumstance, coupled with overall horizontal percentage reductions, has severely complicated financial management of the entire program. Confronted with the necessity for financing fixed or rising nonpersonal service costs, and unable to apply any part of overall reductions to these categories, the States for the last several fiscal years have begun operations in each new year with a "built-in" deficit.

This was a major factor in the first half of fiscal 1958, and certainly contributed to the rather large cost absorption which is being experienced in the current fiscal year.

MANDATORY INCREASES

In 1959 there can be no doubt that at least the full amount of the nonpersonal services request is needed. Without attempting to be exhaustive, we cite only a few examples.

There are mandatory increases in the contributions for employee retirement. The additional space which had to be rented to accommodate the expanding volume of employment security workloads will have to be paid for. Tabulating equipment rental costs will be higher. More forms will be required. Postage costs will increase. Experience clearly demonstrates that these nonpersonal services costs have to be met and that the States have no choice except to pay the going rate.

DEFENSE READINESS ACTIVITIES

One other item which was deleted by the House, and for which we are requesting restoration in the amount of $1,287,000 is the provision for defense readiness activities. In a national emergency, the State employment security agencies would be expected to become, practically overnight, the manpower arm of civil defense.

In order for the State agencies to develop needed plans, procedures, and standby facilities for emergency conditions, some minimum financing arrangement must be provided. The amount requested is badly needed to permit the State agencies to finance at least the initial phases of this added and highly important responsibility.

In summary, for grants to the States for administration of the unemployment compensation and employment service programs in the fiscal year 1959, I am requesting restoration of the full amount of the $24,300,000 reduced by the House.

This includes:

For personal services	$20,227,000
For nonpersonal services	2,786,000
For defense readiness	1,287,000

I want to repeat that, in addition to this amount, a supplemental appropriation will be necessary, since, unfortunately, all evidence indicates that insured unemployment in 1959 will exceed an average of 2 million per week.

In closing, I wish again to express my appreciation for this opportunity to present to the committee these views on behalf of the State

employment security agencies. I shall be more than happy to try to answer any question which you may have.

Senator HILL. Mr. Weems, is there anything you would like to add?

Mr. WEEMS. No, thank you, Senator.

Senator SMITH. How about you, Mr. Huff.

Mr. HUFF. Thank you, no, Senator.

Senator HILL. Senator Smith.

Senator SMITH. Not any questions.

Senator HILL. We want to thank you all for your appearance this morning and for the splendid presentation that you have made. We have appreciated it very, very much.

Mr. NORWOOD. Thank you for the privilege.

Senator HILL. Mr. Danstedt, National Association of Social Workers, Inc.

PUBLIC ASSISTANCE PROGRAMS

NATIONAL ASSOCIATION OF SOCIAL WORKERS, INC.

STATEMENT OF RUDOLPH T. DANSTEDT, DIRECTOR, WASHINGTON BRANCH

STAND OF ASSOCIATION

Mr. DANSTEDT. Mr. Chairman and Senator Smith, I am Rudolph T. Danstedt, director of the Washington branch of the National Association of Social Workers.

I would like to say that our association is a professional organization of persons employed in governmental and voluntary sectarian and nonsectarian agencies throughout the United States. Our members are staff people and local and State public-welfare department people, and I think have a close contact with many of the issues that are involved in appropriations for the Department of Health, Education, and Welfare.

I am not going to read my statement. I would like to file it.

Senator HILL. We will put it in the record in full.

Mr. DANSTEDT. I would like to say a few words and highlight a few points.

I would like to strongly endorse the comments made by Mr. Hecht with respect to the importance of increasing child welfare funds from the present $10 million to $12 million or from the $11 million approved by the House to $12 million.

RESTORATION REQUESTED

I would like to add this additional argument: If I recall correctly, when that authorization was established in 1956, the figure talked about first was $15 million. It was compromised back to $12 million. We are growing at the rate of 3 million children a year, so we are roughly 9 million children later.

It seems kind of sensible to bring it up to that low figure of $12 million now.

Senator HILL. The House raised it $1 million and you are asking us to raise it another million?

Mr. DANSTEDT. This would give us the original request and recognition of the fact that this is 9 million children later from when the authorization was brought up in the first place.

Funds were not asked for with regard to certain programs in the past nor were sufficient funds asked for. I think you have heard from us on one program. It has to do with cooperative research in welfare and social security. We would like to suggest that some figure like $2 million be considered. That was the figure that that Department asked for in 1957–58. It was the figure they asked for this year, and they did not get approval from the Bureau of the Budget on it.

TRAINING AND RESEARCH NEEDED

The key argument there is that we are spending something like $10 billion a year in Federal and State funds for social security and public assistance, and it makes sense for us to engage in some kind of research. Whether this is right or wrong, it seems to be that you do not get these things off the ground sometimes unless there is some Federal leadership exercised.

The other appropriation we would like to suggest is that there be something in the order of $2.5 million in welfare training. That is the figure the Department asked for in 1957–58. It is the figure they asked for also for 1959, but it was not approved by the Bureau of the Budget.

I think the key argument there is that, as I think we are all aware, the public-assistance program is not primarily a program to help unemployment. This is primarily a program for the aged and for children, for the blind and for the handicapped.

We feel that to continue to operate this program without trying to develop some opportunities for some trained social work personnel, is an inadequate approach to it.

We have developed the argument at some length in this particular statement.

NEW POSITIONS NEEDED

The third aspect that I would like to direct some attention to is the importance of providing some additional staff positions in the Bureau of Public Assistance. We have suggested something like 25 additional staff positions.

Again, we have become historical on that. That is roughly the staff positions asked for the Department in 1957 for the 1958 fiscal year. The argument then advanced was sound. It was to allow some personnel to enable them to put into effect more fully the self-help and self-care amendments to the Social Security Act and to provide the consultation the States need with respect to the medical-care amendment that was passed in 1956 and modified again somewhat in 1957.

Those are the primary points of appeal that I would like to propose with respect to the programs authorized for which either no appropriations were made or insufficient appropirations were made.

My arguments are developed at much more length in my statement, but I agree that the best sermons are the shortest sermons.

Senator HILL. You agree that brevity is the soul of wit.

Mr. DANSTEDT. I think so.

Senator HILL. Senator Smith, any questions?

Senator SMITH. Not any questions, Senator.

Senator HILL. Mr. Danstedt, we certainly appreciate your appearance here this morning and the very forceful presentation which you have made.

Mr. DANSTEDT. Thank you. I am very glad to have had the opportunity.

(Mr. Danstedt's prepared statement follows:)

STATEMENT BY RUDOLPH T. DANSTEDT, DIRECTOR OF THE WASHINGTON BRANCH OFFICE, NATIONAL ASSOCIATION OF SOCIAL WORKERS

Mr. Chairman and members of the committee, I am Rudolph T. Danstedt, director of the Washington branch office of the National Association of Social Workers. Our association is a professional organization of persons employed in governmental and voluntary sectarian and nonsectarian agencies throughout the United States. I would like to register our association's general support for H. R. 11645 as passed by the House, particularly the appropriations proposed for the Department of Health, Education, and Welfare, and even more specifically appropriations proposed for the Office of the Social Security Commissioner, the Children's Bureau, and th Bureau of Public Assistance.

There are several phases of the operations of the Office of the Social Security Commissioner, the Bureau of Public Assistance, and the Children's Bureau which we believe could be substantially strengthened if the appropriations which have been authorized are allowed or increased.

I would like to address myself to the 1956 amendments to the Social Security Act for cooperative research in social security and welfare and training of public welfare personnel, and would like to file for the record a supplementary statement which outlines briefly the history of these amendments beginning with their enactment in 1956 and following them through the first session of this Congress and the second session to date.

First, we are proposing that $2 million be allocated for cooperative research grants to public-welfare departments, universities and other qualified research groups for the purpose of conducting research in the fields of social security and public welfare and encouraging demonstrations into the most effective methods of administering our public-assistance program. We propose further that an appropriation of $80,000 be provided for the retaining of necessary staff in the Office of the Social Security Commissioner for the purpose of planning the most intelligent and significant utilization of these funds by groups qualified to conduct research and perform demonstrations. These were the requests made by the Department of Health, Education, and Welfare in 1957 for the 1958 budget.

Secondly, we propose that $2.5 million be appropriated for training of public welfare personnel in the budget of the Bureau of Public Assistance together with $40,000 to provide a staff of eight persons to administer this program. Those also were the Department's requests for 1958.

These two provisions of the Social Security Act for cooperative research and training of public welfare personnel are an integral part of the program accepted in 1956 by the Congress for significant improvement in the administration of public assistance, but more importantly services to recipients of public assistance. It will be recalled that the 84th Congress, 2d session, also amended the categorical public assistance titles of the Social Security Act to encourage services of self-help, self-care and maintenance of family life. The Congress further set up a program of Federal matching funds for medical care to recipients of public assistance. Valuable as these latter amendments are, they are in a sense, the body without a head and hands, since the development of procedures whereby self-help, self-care and maintenance of family life programs could be most effectively administered, one of the key purposes of cooperative research, and the educational procedures whereby personnel could be prepared to provide the social services needed in such programs of self-help and self-care, a primary purpose of the training amendment, have never been implemented by appropriations.

We urge therefore that these 1956 amendments to the public assistance titles of the Social Security Act be put into effect in the fiscal year 1959.

Thirdly, we propose that needed additional staff be provided for the Bureau of Public Assistance. Last year, in connection with the 1958 fiscal budget,

the Bureau asked for 324 permanent positions in contrast to their presently authorized request for 1959 of 288 positions. The justification presented by the Bureau last year for somewhere in the order of 30 positions above the 1957 level of positions was directed toward generally strengthening the Bureau's consultative and advisory services to the States in the face of the enlarged range of responsibilities authorized by the 1956 amendments. About one-third of these needed positions are directly tied to the medical care program authorized in 1956, slightly more than another one-third are related to the administration of a program of training of public welfare personnel, while the remainder are concerned with helping the Bureau keep abreast of the demands placed up it by the States for advice and guidance in programs affecting the welfare of almost 6 million people.

Fourthly, we propose that appropriations for child welfare services under title V, Grants to the States for Maternal and Child Welfare, be increased to the full authorization of $12 million. We were pleased to note that the House did bring this appropriation up from the $10 million requested to $11 million. We would urge that the full $12 million authorization be approved. Again, it should be noted that when the child welfare services section of title V of the Social Security Act was amended in 1956 an authorization of $15 million had been proposed which in the final action was cut back to $12 million. Some 3 years later and at least 9 million more children in the United States, it seems both appropriate and desirable that the full $12 million be made available.

I would like to develop still further our specific interest and concern for cooperative research and training grants. To do this I will highlight some material on both of these proposals developed by Mr. David G. French, executive secretary of the coordinating committee on social welfare research of the University of Michigan, and Miss Pauline Bushey, a member of the faculty of the School of Social Work, University of Michigan, and a specialist in the field of training public welfare personnel.

There are many arguments for the need and desirability of Federal funds for cooperative research in welfare and social security. The first and most obvious of these is that any program which is responsible for spending in the order of $20 billion of Federal, State, and local taxes and trust funds for social security and public assistance should be subject to continuing research not only by the departments of government responsible for administering these programs, but by independent, qualified research groups. Recently an inventory was prepared on current social research by Community Research Associates of New York. This inventory listed something over 372 studies of projects identifiable in some degree as social research. However, only nine of these projects could be described and classified as making some rather immediate contributions to several key problems of the public assistance field; that is, the problems of unmarried mothers on aid to dependent children and the most effective methods and procedures for insuring that through social work services persons on public assistance shall be helped to achieve their maximum potential.

We are convinced that a significant program of research into the sort of social ills that require recourse to public assistance is as urgent as the wide range of research programs that have been instituted for determining the causes and cures of physical ills.

The absence of Federal research grants to universities in the field of social security and welfare has tended to skew research interest in these universities toward fields where Federal funds are available, namely, health, vocational rehabilitation, and education. This is uniquely true of research personnel with qualifications in the social sciences as well as in the field of social work who normally and naturally tend to develop their research programs in the areas where the money can be found without undue search and justification.

Thus the size of our public assistance, social security program demands research. There are many identifiable problems that are capable of research of significance, but Federal leadership and funds are required to encourage the interest of qualified research people in these areas.

The School of Social Work of the University of Michigan in cooperation with that State's department of public welfare recently completed out of the university's and welfare department's funds a project which sought to test the contributions that inservice training and special preparation of staff could make in helping people, in this instance recipients to ADC to realize their maximum potentials. Without going into detail, the results of this project demonstrated that public welfare staff with training were able to assist significantly families

in improvement of housekeeping, development of individual resources, and in an enhanced sense of personal worth. Further, this public welfare staff contributed significantly to assisting and guiding family members in obtaining employment.

Again, the public welfare field is suffering relative to other areas of social work services in terms of its ability to recruit and hold qualified personnel because of the lack of scholarship and fellowship support for persons who wish to work in the public welfare field. For example, the fields of child welfare and mental health have well-established fellowship and work-study programs. Somewhere in the order of 55 percent of the stipends to support students in schools of social work are provided by child welfare and mental health agencies. So, as could be expected, 55 percent of the students leaving schools of social work take employment in child welfare or mental health programs. In contrast, 10 percent of the stipends for students come from public welfare programs and 8 percent take employment in these public welfare programs.

There is little doubt but that the public assistance program, because of the impact of the recession, is going to cost the Federal Government and the States many millions of dollars more than was true last year. In the face of these rising and necessary expenses, logic would seem to call sharply for the kind of cooperative research and training of public welfare personnel that the Department of Health, Education, and Welfare and the Congress considered so essential in 1956, when the economic situation was so much more promising and favorable.

We believe that if H. R. 11645 is improved along the lines suggested, by providing funds for cooperative research in welfare and social security and training of public welfare employees, by enlarging the staff of the Bureau of Public Assistance so that it may more realistically carry the responsibilities placed upon it, and by providing $12 million for child welfare services, significant and helpful steps toward the prevention of dependency and toward constructive services to people will be taken.

SUPPLEMENTARY STATEMENT OF THE NATIONAL ASSOCIATION OF SOCIAL WORKERS ON GRANTS FOR COOPERATIVE RESEARCH AND FOR TRAINING OF PUBLIC WELFARE PERSONNEL

The National Association of Social Workers, a membership organiaztion of professional social workers employed in governmental and in voluntary sectarian and nonsectarian agencies, urges that favorable consideration be given to allocating $2 million for cooperative research and $2.5 million for training of public-welfare personnel, together with the necessary funds for staff to administer these programs. The funds for cooperative research would be allocated to the Office of the Social Security Commissioner of the Department of Health, Education, and Welfare, while funds for training would be in the budget of the Bureau of Public Assistance of that Department.

The amount of funds proposed for these programs is identical with the requests made in 1957 for the 1958 fiscal year, and included, in the instance of cooperative research, a staff provision for 4 professional and 4 clerical and stenographic positions which, together with other appropriate costs, would total $80,000. The proposals for funds for training of public-welfare personnel are also identical with the requests made in 1957 for the 1958 fiscal year, together with funds for 8 professional, clerical, and stenographic positions at an estimated cost of $40,000.

HISTORY OF COOPERATIVE RESEARCH AND TRAINING GRANT PROPOSALS

Action taken by 2d session, 84th Congress

Cooperative research in social security and welfare.—In 1956, the Congress amended title XI (general provisions) of the Social Security Act by adding a new section, 1101, which authorizes funds for cooperative research in social security and welfare. Public Law 880, which contains this section, provides authorization up to $5 million for grants to the States, public and other nonprofit organizations, and for the making of contracts or jointly financed cooperative arrangements of the research and demonstration projects in social security. The legislation identified three illustrative areas in which grants may be made for research or demonstration projects. These are (1) projects relating to the prevention and reduction of dependency; (2) projects which will aid in effecting coordination of planning between private and public welfare agencies; and (3) projects which

will help improve the administration and effectiveness of programs carried on or existing under the Social Security Act and programs related thereto.

No appropriation was provided by the Congress because the authorized legislation was not enacted until just before Congress adjourned.

Action taken by 1st session, 85th Congress

In 1957, the Department of Health, Education, and Welfare requested $2 million for grants and $80,000 for 4 professional and 4 clerical and stenographic positions and related expenses to administer this program.

The House Subcommittee on Appropriations for Labor, Health, Education, and Welfare approved this request, but it was rejected by the full Appropriations Committee.

The Department of Health, Education, and Welfare appealed the request to the Senate Subcommittee on Appropriations for Labor, Health, Education, and Welfare, which allowed $1 million. This, however, was rejected by the full full Appropirations Committee.

Status in the 2d session, 85th Congress

In 1958, the Department of Health, Education, and Welfare again requested $2 million for cooperative research, but this was denied by the Bureau of the Budget. In the hearings of the House subcommittee, Department officials' statement gave various reasons for this denial by the Bureau of the Budget. In one instance, the Department claimed that it was rejected because this program had been twice recommended to the Congress but had been turned down. In another instance, the record shows the following statement: "The administration has the problem of taking the requests of departments and determining priorities, and, in terms of priorities, the administration is determined that many new programs should not be begun."

That the Department of Health, Education, and Welfare places a high priority on funds for cooperative research is demonstrated in correspondence between Mr. Folsom and Congressman Fogarty. On March 14, 1958, Mr. Marion B. Folsom indicated to the chairman of the House Subcommittee on Appropriations for Labor, Health, Education, and Welfare, the Honorable John E. Fogarty, of Rhode Island (letter printed on page 4997 of the Congressional Record for Thursday, March 27, 1958), that "we are currently considering certain small amendments to the 1959 budget which would permit the initiation on a limited basis of programs related to the self-help and self-care provisions of the Social Security Act. Unfortunately, there is insufficient time to review the necessary steps prior to Monday, March 17, the date referred to in your letter. If these items are formally approved, they will be transmitted as soon as possible."

The amendments referred to in Mr. Folsom's letter concern proposals for providing limited-duration demonstration grants for cooperative research and training which would total $2.7 million over a period of 3 years beginning in fiscal year 1959.

Summary.—This proposal for cooperative research in social security and welfare was initiated by the administration in 1956 and authorized by the Congress. The Department of Health, Education, and Welfare, through both its Secretary and Commissioner of Social Security, have consistently supported the need and desirability of funds for such cooperative research. In 1957, funds were requested, with the approval of the Bureau of the Budget, but they were rejected by the Congress. In 1958, funds were not requested, although after the markup had begun on the House bill there was evidence that the Department was considering a request for modest funds in this area. To date, approval for submitting such a request has not been granted by the Bureau of the Budget.

Action taken by 2d session, 84th Congress

Training grants for public-welfare personnel.—In 1956, the Congress amended title VII (administration) of the Social Security Act by adding a new section, 705. Public Law 880, which contains this section, authorized $5 million for grants to the States for the purpose of (1) grants to public or other nonprofit institutions of higher learning for training personnel employed or preparing for employment in public-assistance programs; (2) special courses of study or seminars of short duration conducted for such personnel by experts hired on a temporary basis for the purpose; and (3) establishing and maintaining, directly or through grants to such institutions, fellowships or traineeships for such personnel at such institutions, with such stipends and allowance as may be permitted under regulations of the Secretary.

Such grants to the States would be on an 80-percent Federal, 20-percent State matching basis.

No appropriation was provided by the Congress because the authorized legislation was not enacted until just before the Congress adjourned.

Action taken by the 1st session, 85th Congress

In 1957, the Department of Health, Education, and Welfare requested $2.5 million for grants for training of public-welfare personnel and funds necessary to provide for approximately 8 positions for the administration of this program.

The House Subcommittee on Appropriations for Labor, Health, Education, and Welfare approved this request, but it was rejected by the full Appropriations Committee.

The Department of Health, Education, and Welfare appealed the request to the Senate Subcommittee on Appropriations for Labor, Health, Education, and Welfare, which allowed $1 million. The subcommittee's proposal, however, was rejected by the full Appropriations Committee.

Status in the 2d session, 85th Congress

No funds were requested for training of public-welfare personnel by the administration in 1958 for the fiscal year 1959 for the same reasons already outlined under the section on cooperative research. The proposed amendments to the 1959 appropriations requests discussed under the section on cooperative research would also have included, as indicated, some funds for the training of selected public-welfare personnel.

Summary.—As in the instance of funds for cooperative research, the Secretary of the Department of Health, Education, and Welfare, the Social Security Commissioner, and the Director of the Bureau of Public Assistance have strongly supported the necessity and desirability of funds for training. Currently, the Department is seeking the approval of the Bureau of the Budget for a limited proposal which would enable the initiation of some training activities for selected public-welfare personnel.

INTERRELATIONSHIPS OF VARIOUS AMENDMENTS TO THE PUBLIC ASSISTANCE TITLES OF THE SOCIAL SECURITY ACT

When legislation was proposed in 1956 for amending several of the public-assistance titles of the Social Security Act, these proposals represented an integrated approach to a significant and intelligent mobilization of efforts to serve more effectively and constructively the millions of persons in receipt of public assistance. Technically, there were seven proposals, all of which were approved. Three of these proposals affected Title I: Grants to the States for Old Age Assistance; Title X: Grants to the States for Aid to the Blind, and Title XIV: Grants to the States for the Permanently and Totally Disabled, by providing that among the important purposes of these titles would be provision of services which would help persons receiving assistance under these titles to obtain self-support or self-care. The amendment to Title IV: Grants to the States for Aid to Department Children, recognizes that among one of the most important purposes of this title should be a provision of services which would help maintain and strengthen family life and help the parents and relatives of these dependent children to obtain maximum self-support and personal independence consistent with the maintenance of continuing parental care and protection.

As earlier described, title XI was amended to provide for cooperative research in welfare and social security, and title VII to provide for training of public-welfare personnel.

The final amendment to the public-assistance titles made provisions for Federal matching of assistance expenditures for medical care.

Thus, there was mounted a significant effort, through legislation and necessary appropriations, to develop a constructive and significant approach to the needs of people on public assistance.

The failure of the Congress in the 1st session of the 85th Congress to appropriate funds for cooperative research and training of public-welfare personnel, and the failure of the administration in the 2d session of the 85th Congress to seek funds for these purposes essentially means that planning for a coordinated approach to the problems of people on public assistance as envisaged in the 1956 amendments limps along, for the primary emphasis in the public-assistance titles continues to be on grants rather than a balanced concern for both adequate grants as well as social services and research into the methods for more effective ways in meeting need.

TELEGRAM FROM JOSEPH P. ANDERSON

Senator HILL. The committee is in receipt of a telegram from Mr. Joseph P. Anderson, executive director, National Association of Social Workers, New York, advocating appropriations for cooperative research in social security and training of public-welfare workers. Mr. Anderson's telegram will appear at this point in the record.

(The telegram referred to follows:)

WASHINGTON, D. C., *April 16, 1958.*

Hon. LISTER HILL,

Chairman, Senate Subcommittee on Appropriations for Labor, Health, Education, and Welfare, Senate Office Building, Washington, D. C.:

Understand that witnesses for the social security administration of the Department of the Health, Education, and Welfare may appear before your committee on Thursday, April 17. Our association strongly supports the need for cooperative research in welfare and social security and training of public-welfare personnel, funds for which regretfully were not requested by the administration for fiscal 1959. We would like to have the record of your committee show at the appropriate point the testimony of administration witnesses that our association urges the appropriation of $2 million for cooperative research and $2½ million for welfare training.

JOSEPH P. ANDERSON,
Executive Director, National Association of Social Workers.

Senator HILL. Bertram G. Davis. You are here representing the American Legion.

Mr. DAVIS. Yes, sir.

Senator HILL. And you are accompanied by?

Mr. DAVIS. Clarence W. Bird of the national economic commission of the American Legion.

Senator HILL. Yes, sir. We will be glad to have you proceed.

BUREAU OF VETERANS REEMPLOYMENT RIGHTS AND VETERANS EMPLOYMENT SERVICE

AMERICAN LEGION

STATEMENT OF BERTRAM G. DAVIS, LEGISLATIVE ASSISTANT, AMERICAN LEGION, ACCOMPANIED BY CLARENCE W. BIRD, DIRECTOR, NATIONAL ECONOMIC COMMISSION, THE AMERICAN LEGION; AND STATEMENT BY RANDEL SHAKE, DIRECTOR, NATIONAL CHILD WELFARE COMMISSION

VETERANS' EMPLOYMENT AND PLACEMENT SERVICES

Mr. DAVIS. Mr. Chairman, there are two areas to which we would like to address ourselves this morning. The first is the increased appropriation for the control of venereal disease.

The director of our child-welfare commission cannot be here this morning. He asked me to have that statement submitted.

Senator HILL. It will appear in the record following the testimony of you two gentlemen.

Mr. DAVIS. Mr. Bird will give the testimony with respect to the Department of Labor, and he will highlight his statement and ask that it be incorporated in the record.

Mr. BIRD. Mr. Chairman and members of the subcommittee, I would like to express my appreciation on behalf of the American Legion

for this opportunity to appear and present testimony with reference to appropriations for the United States Department of Labor.

We, of the American Legion, have recommended to previous sessions of Congress the necessity of adequate funds for the operation of the Veterans' Employment Service; mature workers program; Bureau of Veterans' Reemployment Rights; and the President's Committee on Employment of the Physically Handicapped.

HOUSE ACTION

The American Legion is pleased that House-passed H. R. 11645 approved the 1959 budget of the Veterans' Employment Service—Veterans' Placement Service—and the Bureau of Veterans' Reemployment Rights. We respectfully urge that this committee likewise favorably report the budgetary requests of these agencies so that they may continue to render these vital services.

The programs and operations of the Veterans' Employment Service and the State employment security agencies have been carefully observed during the current year by the American Legion. We are gratified by the strong support given our employment program over the country by these operating agencies. The American Legion, and we believe the Veterans' Employment Service, views with concern what appears to be a definite and continuing rise in unemployment over the entire country.

There were, as of February 15, 1958, 5,173,000 unemployed workers. The publication Current Population Reports—Labor Force, March 1958, indicates that 843,000 World War II male veterans are unemployed.

VETERANS' APPLICATIONS

During the past year, more than 1,800,000 new veteran applications were received by the State employment security offices over the country; of this number, more than 135,000 were from disabled veterans. Through these offices more than 1,400,000 veteran placements were made, 122,200 of which number represent disabled veterans.

At the end of last year's efforts, there were still over 500,000 veterans registered over the Nation with the local offices of the State employment security agencies, and of this number more than 57,000 registrations represent disabled veterans.

The American Legion feels that the operation of the Veterans' Employment Service and the State employment security agencies for the past year in their mutual programs of special service to veterans, have been successful and merit our continued support.

An examination of the budget submitted by the United States Department of Labor for the fiscal year 1959 reveals a requested sum of $1,145,800 for the operation of the Veterans' Employment Service.

The American Legion supports the appropriation of this sum as being fair and reasonable for the purpose of carrying out this program.

For some years now we have had a keen interest in programs aimed at insuring that middle-age and older workers receive a fair opportunity for employment commensurate with their abilities and qualifications.

AID TO OLDER WORKERS

The Bureau of Employment Security, and its affiliated State employment security agencies, have been making determined efforts to aid older workers, including veterans, to obtain suitable employment.

A basic finding in the older worker studies conducted by the Bureau was that its application of a number of special techniques, such as group guidance, were all helpful in expediting suitable employment for these job seekers.

It was found that a strong basic employment service is essential for effective service to older workers. It is for this reason that we respectfully ask that the subcommittee give favorable consideration to the total employment service budget request which we understand would provide for moderate increases over the present level of activity, particularly in the services rendered disabled and the older worker.

REEMPLOYMENT RIGHTS

The American Legion advocated the reemployment rights benefits which the Congress originally granted veterans of World War II.

Therefore the American Legion, at its 1957 National Convention, in keeping with traditional policies of supporting a strong national defense, and an adequate military reserve program, adopted Resolution No. 49, which is self-explanatory, and attached hereto.

Senator HILL. That resolution will appear in full in the record.

Mr. BIRD. The Department of Labor has requested the sum of $542,000 for the fiscal year 1959, for allocation to the Bureau of Veterans Reemployment Rights—page 734 of the budget.

We respectfully request approval of the above-mentioned sum by the subcommittee for the fiscal year 1959.

At our 1957 national convention we adopted resolution No. 463 which mandates the Economic Commission and the American Legion to continue its activities in support of the President's Committee on Employment of the Physically Handicapped.

I am a member of the President's Committee. I feel that it is one of the finest programs.

Senator HILL. We are very happy to have you gentlemen here. I want to thank you. We are delighted to have had you.

(Mr. Bird's prepared statement follows:)

STATEMENT OF CLARENCE W. BIRD, DIRECTOR, NATIONAL ECONOMIC COMMISSION, THE AMERICAN LEGION

Mr. Chairman and members of the subcommittee, I would like to express my appreciation on behalf of the American Legion for this opportunity to appear and present testimony with reference to appropriations for the United States Department of Labor.

We, of the American Legion, have recommended to previous sessions of Congress the necessity of adequate funds for the operation of the Veterans' Employment Service; mature workers program; Bureau of Veterans' Reemployment Rights; and the President's Committee on Employment of the Physically Handicapped. In this connection, the American Legion at its 1957 national convention adopted 4 resolutions, Nos. 238, 47, 49, and 463, respectively.

The American Legion is pleased that in House-passed H. R. 11645, approved the 1959 budget of the Veterans' Employment Service (Veterans' Placement Service), and the Bureau of Veterans' Reemployment Rights. We respectfully urge that this committee likewise favorably report the budgetary requests of these agencies so that they may continue to render these vital services.

VETERANS' EMPLOYMENT SERVICE

Congress, when enacting the Servicemen's Readjustment Act of 1944, which created the Veterans' Employment Service, stated that its objective was to provide an effective job-counseling and employment placement service for veterans so they would be provided with the maximum job opportunities in the field of gainful employment. This objective was reiterated in the enactment of Public Law 550, 82d Congress, which is known as the Veterans' Reemployment Assistance Act of 1952.

The programs and operations of the Veterans' Employment Service and the State employment security agencies have been carefully observed during the current year by the American Legion. We are gratified by the strong support given our employment program over the country by these operating agencies. The American Legion, and we believe the Veterans' Employment Service, views with concern what appears to be a difinite and continuing rise in unemployment over the entire country. According to the latest figures available to us from the Department of Labor and Department of Commerce, there were, as of February 15, 1958, 5,173,000 unemployed workers. The publication Current Population Reports—Labor Force, March 1958, indicates that 843,000 World War II male veterans are unemployed. To these World War II unemployed veterans must be added the ever increasing number of World War I older workers who are being displaced by unrealistic and unfortunate retirement practices of business and industry. The American Legion would like to emphasize that the foregoing is indicative of the constant need for exerted effort in the entire field of finding jobs for veterans and veterans for jobs.

The veteran population of this Nation approximates one-third of the current labor force. A recent report of the Veterans' Administration headlined an announcement that the two millionth Korean veteran had enrolled in one of the Nation's colleges or universities. Statistics reveal that 1 out of every 4 males, or a total of 445,941, enrolling in our colleges and universities over the country continue to be veterans under the Korean GI bill. This group, together with veterans currently being discharged from the Veterans' Administration and military hospitals, plus those completing rehabilitation and training programs, combine to be a continuing challenge to the employment agencies of the Nation.

We would like to again emphasize that we are of the firm belief that the end product of all rehabilitation and training, is a job. During the past year, more than 1,800,000 new veteran applications were received by the State employment security offices over the country; of this number, more than 135,000 were from disabled veterans. Through these offices more than 1,400,000 veteran placements were made, 122,200 of which number represent disabled veterans.

We feel that the programs carried on at the community level in our posts, in cooperation with the local offices of the State agencies throughout the country, contributed cooperatively to this excellent record. We are concerned, however, that at the end of last year's efforts there were still over 500,000 veterans registered over the Nation with the local offices of the State employment security agencies, and of this number more than 57,000 registrations represent disabled veterans.

Resolution No. 238, adopted at our 1957 national convention, urges the Congress to appropriate sufficient funds to insure adequate services to veterans through the Bureau of Employment Security, its United States Employment Service and Veterans' Employment Service, and through grants to State security agencies to the end that the provisions of title IV of the Servicemen's Readjustment Act of 1944, as amended, may be carried out.

The American Legion feels that the operation of the Veterans' Employment Service and the State employment security agencies for the past year in their mutual programs of special service to veterans, have been successful and merit our continued support.

An examination of the budget submitted by the United States Department of Labor for the fiscal year 1959 reveals a requested sum of $1,145,800 for the operation of the Veterans' Employment Service. This amount was embodied in H. R. 11645 as it passed the House of Representatives on March 27, 1958.

The American Legion supports the appropriation of this sum as being fair and reasonable for the purpose of carying out this program. Therefore, we respectfully request that the sum referred to hereinabove be approved.

EMPLOYMENT OF MATURE WORKERS

For some years now we have had a keen interest in programs aimed at insuring that middle-age and older workers receive a fair opportunity for employment commensurate with their abilities and qualifications. In view of this, Resolution No. 47 was approved at our 1957 national convention.

One of the major national efforts to promote suitable employment of mature workers is being made by the Labor Department's Bureau of Employment Security, and its affiliated State security agencies. We, of the American Legion, are vitally interested in the success of these efforts since veterans comprise a sizable segment of this group. The Bureau of Employment Security, in 1956, made a study of the older worker which revealed that a large number of job openings had overage limits of 35 or less, and over 40 percent of the job seekers, 45 or over, were barred from employment. Approximately one-fifth of all job seekers, 45 and over, are veterans. This percentage is constantly increasing. It can be expected that employment problems affecting veterans, because of age, will become intensified as those veterans of World War II and Korea, reach middle-age.

The Bureau of Employment Security, and its affiliated State employment security agencies, have been making determined efforts to aid older workers, including veterans, to obtain suitable employment. As a result of the 1956 studies, a program of improved and expanded service to middle-age and older workers was initiated during 1957 in local employment offices throughout the Nation. Special funds were made available to State employment security agencies for the assignment of older worker specialists, in the State administrative offices and in the large local offices of the State employment offices, in order to spearhead and supervise more effective activities in behalf of the older job seeker. Presently there are approximately 175 local offices which have specialists, operating on a full or part-time basis, serving the needs of the older worker.

For the 6-month period, May through October 1957, a total of over 600,000 job seekers, 45 years of age and over, were placed in employment by the State employment services. It is estimated that well over 1 million will have been placed during the fiscal year 1958. Initial results of increased efforts to place older job seekers are becoming apparent.

A basic finding in the older worker studies conducted by the Bureau was that its application of a number of special techniques, such as group guidance, were all helpful in expediting suitable employment for these job seekers. However, proper application of the basic counseling and placement techniques previously introduced in the local employment offices were, in general, found the most effective in service to older workers. It was found that a strong basic employment service is essential for effective service to older workers. It is for this reason that we respectfully ask that the subcommittee give favorable consideration to the total employment service budget request which we understand would provide for moderate increases over the present level of activity, particularly in the services rendered disabled and the older worker.

VETERANS REEMPLOYMENT RIGHTS

The American Legion advocated the reemployment rights benefits which the Congress originally granted veterans of World War II. We appreciate the consistent legislative support and continuation of this program for those who serve their country in active military service and Reserve training. Therefore, the American Legion, at its 1957 national convention, in keeping with traditional policies of supporting a strong national defense, and an adequate military Reserve program, adopted Resolution No. 49, which is self-explanatory, and attached hereto.

We are pleased with the progress already made by the Bureau of Veterans Reemployment Rights in working out cooperative procedures with the Department of Defense. We are also pleased with the service rendered by the Bureau to persons entitled to the protection of reemployment statutes. With the unsettled national economic outlook, we deem it essential that these efforts be intensified to safeguard against the loss of valuable job-rights protection, which might otherwise result from unfamiliarity with their obligations and concomi-

tant rights under the reemployment rights statutes by employers, ex-servicemen, reservists and members of the National Guard.

The Department of Labor has requested the sum of $542,000 for the fiscal year 1959, for allocation to the Bureau of Veterans Reemployment Rights (p. 734 of the budget). The House of Representatives in H. R. 11645 approved the requested amount on March 27, 1958, which is the same amount as that appropriated by the Congress for the fiscal year 1958. We respectfully request approval of the above-mentioned sum by the subcommittee for the fiscal year 1959.

PRESIDENT'S COMMITTEE ON EMPLOYMENT OF THE PHYSICALLY HANDICAPPED

At our 1957 national convention we adopted Resolution No. 463 which mandates the Economic Commission and the American Legion to continue its activities in support of the President's Committee on Employment of the Physically Handicapped. As this subcommittee is well aware, we have a long-standing record of cooperation, support, and financial assistance to the governors' committee on employment of the physically handicapped. The program of the President's Committee complements the successful record of promotional efforts carried on by the Veterans' Employment Service, the State employment security agencies and other public and private agencies primarily interested in the employment of both disabled veterans and the handicapped. May we take this opportunity of commending the efforts of the President's Committee on the Employment of the Physically Handicapped.

1957 NATIONAL CONVENTION OF THE AMERICAN LEGION HELD IN ATLANTIC CITY, N. J., SEPTEMBER 14–19, 1957

Resolution No. 47.
Committee: Economic.
Subject: National intensified educational program be enacted to hire veterans over 45.

Whereas the American Legion is firmly of the opinion as it has been over the years, that the greatest encouragement to the individual, and the greatest benefit to the Nation as a whole, is the right of the individual, where qualified, to secure gainful employment, both in private industry and in Government service; and

Whereas there exists a prejudice against the employment of the older worker in the minds of many which is founded upon the false assumption that the calendar age of an individual determines his qualifications for a position; and

Whereas the American Legion insofar as the mature worker is concerned believes as it does in the case of the physically handicapped, that the abilities of the individuals should be the determining factor in employment, rather than a physical disability which in no way is required for the performance of a particular job, nor does the age barrier in any way finally determine the qualifications or capabilities of an individual; and

Whereas the American Legion considers it virtually criminal to deny employment to the older workers where they are qualified, and such denial is a dissipation of one of the greatest assets that is available to industry; and

Whereas the American Legion is dedicated to service, and gainful employment is the ultimate objective of those who are presently being denied employment solely by reason of age: Now, therefore, be it

Resolved by the American Legion in National Convention assembled in Atlantic City, N. J., September 16–19, 1957, That we do hereby proclaim that a program to encourage gainful employment of mature workers shall be a major function of the American Legion in the ensuing year, and to solicit and encourage the participation of all other groups, including labor, management, industry, insurance, the press, radio, television, and all civic and educational groups, fraternal groups and others who have heretofore expressed an interest in this important program, to the end that avenues of employment may be opened to those who are qualified and available for employment; and be it further

Resolved, That the national employment committee in conjunction with the national economic commission be instructed to blueprint a specific program to meet with the policymaking group representing management, labor, and Government to create a climate favorable to the employment of older workers; and be it further

Resolved, That adequate funds for this purpose be made available to the employment committee through the National Economic Commission for promotional and publicity purposes, and that existing resources of the American Legion to accomplish the desired purposes be exerted; and be it further

Resolved, That the national commander be requested to make at least one major address on the subject of utilizing older workers and to otherwise use his influence in reversing the alarming trend toward discrimination in the employment of the older workers.

Resolution No. 49.
Committee: Economic.
Subject: Adequate funds for Bureau of Veterans' Reemployment Rights.

Whereas the American Legion in national convention has repeatedly supported the operations and endorsed objectives of the Bureau of Veterans' Reemployment Rights of the United States Department of Labor, and

Whereas the Bureau of Veterans' Reemployment Rights has been discharging its responsibilities to veterans with reemployment problems under extremely adverse conditions due to a vastly increased workload and insufficient personnel, and

Whereas the Bureau of Veterans' Reemployment Rights is dependent upon the cooperation of veterans' organizations to provide informational assistance and an appropriate referral service: Now, therefore, be it

Resolved, That the American Legion in national convention assembled in Atlantic City, N. J., September 16–19, 1957, urges each post to assist the Bureau of Reemployment Rights field representatives in disseminating accurate information and making appropriate disposition and referral of specific problems to the field representative; and be it further

Resolved, That we urge all congressional representatives and national legislative officers to support adequate appropriations for the Bureau of Veterans' Reemployment Rights in order to provide the maximum of assistance to returning servicemen.

Resolution No. 238.
Title: Veterans' Employment Service.

Whereas it has been the American Legion's long-established policy to promote a maximum employment program for all veterans; and

Whereas the Servicemen's Readjustment Act of 1944, as amended, provides for the establishment of facilities for adequate counseling and placement service for all veterans; and

Whereas the United States Department of Labor has the legal responsibility to establish policies for carrying out provisions set forth in the GI bill, as amended; and

Whereas the Director of the Bureau of Employment Security, the Chief of the Veterans' Employment Service, the veterans' representatives of the States, and the State employment agencies have been mandated to carry out these policies as provided in the GI bill, as amended; and

Whereas the United States Department of Labor, through the Bureau of Employment Security and its Chief of the Veterans' Employment Service and the United States Employment Service for the District of Columbia are greatly concerned in providing adequate counseling and placement service for all veterans: Now, therefore, be it

Resolved, That the American Legion in national convention assembled in Atlantic City, N. J., September 16–19, 1957, through their officials give their full support to the Federal and State agencies and the District of Columbia in their desire to better serve the employment needs of veterans; and be it further

Resolved, That the national commander, the national legislative commission, and the national economic commission be mandated to use their utmost efforts to the end that sufficient funds be provided by congressional appropriation to insure adequate service to the veterans of the Nation through the Bureau of Employment Security, its United States Employment Service, and Veterans' Employment Service, and through grants to the State employment services to insure adequate service to the end that the provisions of title IV of the Servicemen's Readjustment Act of 1944, as amended, be carried out as contemplated in the original enactment of this law.

Resolution No. 463.
Committee: Economic.
Subject: Continue Support of President's Committee on Employment of the Physically Handicapped.

Whereas the American Legion national economic commission has a longstanding record of cooperation and support of the President's Committee on Employment of the Physically Handicapped: and

Whereas the American Legion has provided both active cooperation and financial assistance to the governor's committee on employment of the physically handicapped: and

Whereas the employment of both disabled veterans and the handicapped is of utmost concern to the American Legion: Now, therefore, be it

Resolved by the American Legion in national convention assembled in Atlantic City, N. J., September 16–19, 1957, That the national economic commission of the American Legion continue its activities in support of the President's NEPH Committee.

STATEMENT OF RANDEL SHAKE, DIRECTOR, NATIONAL CHILD WELFARE COMMISSION, THE AMERICAN LEGION, BEFORE THE SUBCOMMITTEE, DEPARTMENTS OF LABOR, AND HEALTH, EDUCATION AND WELFARE, SENATE APPROPRIATIONS COMMITTEE ON H. R. 11645, MAY 12, 1958

Mr. Chairman and Members of the subcommittee, the American Legion wishes to be recorded as favoring an increase in the appropriation for venereal disease control from $4,400,000 to $5,700,000.

The national child welfare commission of the American Legion, meeting in Indianapolis, Ind., April 27–28, 1958, learned there had been no substantial reduction in the prevalence of venereal disease during the past year. In fact, evidence indicates little, if any, progress has been noted in the reduction of venereal disease in the United States since before the substantial reduction a few years ago in Federal funds for the control program. Our deep concern with this problem culminated in the adoption of Resolution No. 20, by our national executive committee during its meetings on the above dates. We should like at this juncture to quote herinbelow this resolution:

"TEEN-AGE VENEREAL DISEASE

"Whereas teen-age venereal disease and the general problem of venereal disease has shown no reduction the past year: and

"Whereas there has been no substantial reduction in this disease rate since Federal funds provided to the States for control programs were substantially reduced a few years ago: and

"Whereas an extensive joint survey of the venereal disease problem conducted this past year by the American Social Hygiene Association, the State and Territorial Health Officers Association, and the American Venereal Disease Association shows no reduction in venereal disease and in fact an increase in 14 states in the teen-age rate: and

"Whereas in 1955 the American Legion supported an increase in Federal funds to assist the States in their venereal disease programs: Now, therefore, be it

"*Resolved by the national executive committee meeting in Indianapolis, Ind., April 30, May 1 and 2, 1958*, That the American Legion supports an increase in the appropriation of Federal funds for venereal disease control from the present level of $4.4 million to $5.7 million, the amount recommended by the 3 leading private national organizations in the area of venereal disease control."

Our child welfare program has concerned itself with the problem of control of venereal disease for the past 3 years, particuarly among teen-agers. Two years ago we were shocked to learn there were 60,000 reported new cases of teen-age VD during 1955. A joint survey conducted recently by the American Social Hygiene Association, the State and Territorial Health Officers Association, and the American Venereal Disease Association shows that 14 States and 19 major cities noted a rise during 1957 in VD among teen-agers. Only 1 State reported a decline in teen-age cases amounting to only 2 percent. We are concerned that an increasing percentage of the total VD caseload is found among teen-agers. There is an indication that much needs to be done in the way of education, particularly family centered education if headway is to be made in

reducing teen-age VD figures. Many States have noted they have insufficient personnel to carry on an effective education program.

The American Legion is cognizant it will take more than money alone to reduce VD among teen-agers. There are also disturbing moral issues involved in this problem. Our child welfare foundation has made a substantial financial contribution to help finance a behavioral background study of teen-agers who have contracted VD. It is hoped recommendations may be forthcoming from this study which will be helpful to parents, teachers, the clergy, public health personnel, and others in attacking this problem on a moral and social basis. However, until such time as the moral and social issues can be resolved more effectively we urge that additional funds be made available to the medical effort phase of the venereal disease control program.

Senator HILL. This completes the hearing for today.

(Whereupon, at 11:25 a. m., Monday, May 12, 1958, the subcommittee recessed to reconvene at 10 a. m. May 13, 1958.)

LABOR—HEALTH, EDUCATION, AND WELFARE APPROPRIATIONS, 1959

TUESDAY, MAY 13, 1958

UNITED STATES SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D. C.

The subcommittee met at 10 a. m., pursuant to recess, in room F-82, the Capitol, Hon. Lister Hill (chairman of the subcommittee) presiding.

Present: Senators Hill and Thye.

HEALTH, EDUCATION, AND WELFARE

PUBLIC HEALTH SERVICE

STATEMENT OF ARTHUR C. PERRY, ADMINISTRATIVE ASSISTANT TO SENATOR LYNDON B. JOHNSON

WATER POLLUTION SURVEY

Senator HILL. The committee will kindly come to order. Mr. Perry, I understand you have a statement you would like to file with us for Senator Johnson?

Mr. PERRY. Yes, thank you, Mr. Chairman, I am Arthur C. Perry, administrative assistant to Senator Lyndon Johnson. He could not be here this morning. He wanted me to express his interest in this problem and the great importance of the areas affected by this pollution survey. He is hopeful that this committee may be disposed to consider increased funds in order to get this study completed in the next year or two.

At the rate it is going now it will be a number of years before it is completed. Therefore, his statement urges consideration of increased appropriations of $400,000 for the next fiscal year. He is hopeful that you will give full consideration to that.

If I may, I want to ask that his statement be included in the record.

Senator HILL. We will have it in the record at this point, Mr. Perry.

(The information referred to follows:)

STATEMENT BY SENATOR LYNDON B. JOHNSON

Mr. Chairman, the Arkansas-Red River Basins water-quality conservation project is a water-pollution survey being carried out on a coordinating basis by the United States Public Health Service and the Corps of Engineers. It affects not only Texas but our neighboring States of Oklahoma, Arkansas, and Louisiana.

This study, initiated in June of 1957, is a pilot study. Its findings will be of inestimable value when similar surveys on other rivers are initiated in the future.

In the basins of the Arkansas and Red Rivers, natural pollution and oilfield brines are adversely affecting more than 5,000 miles of waterways and more than 40 million acre-feet of runoff annually.

The study being conducted has three objectives:

(1) To determine what are the factors causing mineral degradation of the water;

(2) To identify waters of varying quality and determine their potential for beneficial use;

(3) To develop plans for the improvement of water quality.

The first phase of this study, due to be completed by the end of the present fiscal year, involved the gathering of all known information on water quality, followed by an analysis and determination of gaps in existing data. This phase has been accomplished by the Public Health Service. Its costs, paid from funds appropriated for the overall technical assistance program, has been approximately $85,000.

The work already done on this project has led those participating in it to believe that the waters of the great Lake Texoma can be so improved that they will be usable by industrial, agricultural, and domestic consumers. Such a development would be of tremendous importance, and work looking to this end result should not be delayed.

The survey can be completed for a cost of approximately $1 million, providing that funds are appropriated at a rate that will permit its completion during the next 2 years. To maintain this schedule, funds amounting to approximately $400,000 must be made available during each of the next 2 fiscal years.

The budget allowance for the entire technical assistance program as it now stands would permit the Public Health Service to spend during the next fiscal year only about $85,000 for this water pollution study, about the same amount that has been spent during the current year.

I am informed, however, that the Service could effectively utilize $400,000 for the study during the 1959 fiscal year. In view of the importance of the study—to industry, to public water supply, to the great Federal water development projects in the area—I respectfully urge, Mr. Chairman, that your committee appropriate funds in sufficient amount to make the sum of $400,000 available for this purpose in fiscal 1959.

Mr. Chairman, I ask that there be printed in the record of the committee hearings a statement regarding this study by Mr. Henry Graeser, who is superintendent of the water department of the city of Dallas. This is the statement made by Mr. Graeser earlier this year before a subcommittee of the Committee on Appropriations of the House of Representatives.

Statement of Henry Graeser

My name is H. J. Graeser. I am superintendent of the water department of the city of Dallas. The purpose of my appearance is to bring to the attention of the committee the interest of the city of Dallas in the requested appropriation by the United States Public Health Service for a survey of natural and manmade pollution of the Red and Arkansas River Basins. During the recent drought when the city of Dallas experienced a shortage of water supply, emergency facilities were built to the Red River in order that this flow could augment the dwindling supplies in our reservoirs. This brought very close to home the pollution of the Red River by oilfield brines during the periods of low flow, as water containing as much as 3,500 parts per million of chlorides was pumped into our reservoir, resulting in a concentration of chlorides in our municipal water supply as high as 1,425 parts per million. To illustrate the effect of this concentration of chlorides I would like to point out that the maximum concentration for a potable water supply is considered 250 parts per million. At our own expense we initiated surveys of the Oklahoma and Texas areas in the headwaters of the Red and found a very serious manmade pollution problem. We, of course, recognize the natural pollution but at the extremely low flows we felt this was not the predominant factor since the quality of the water actually improved at the time of runoff. In the course of our investigation under emergency conditions the problem was of such magnitude that very little progress could be made to reduce the pollution. Much of the manmade pollution is the result of small marginal producing oil wells which produce a barrel of salt brine for every barrel of oil. Because more than one State is involved in this problem, coordination and effective control seems impossible at local level.

Our water shortage is now relieved and the city has an adequate supply to meet its requirements for a number of years to come. However, the city of Dallas as well as a number of other cities in north Texas has a vital interest in the Red River as a source of water supply and the handicap that exists so far is still due to the poor mineral content of the river. A semiarid area such as northern Texas cannot afford to overlook such a prolific source of supply in its future plans. For this reason the city of Dallas, in its long-range water study now being completed, has definite plans to utilize some of this water despite its unsatisfactory mineral content. However, the quality limits us to a diversion of only 75 million gallons daily from Lake Texoma when in reality, if the content were satisfactory, the city of Dallas alone could use upward of 200 million gallons daily. This limitation to approximately 75 million gallons daily exists in spite of a planned dilution program in our Elm Fork Reservoir on the Trinity River watershed plus a proposed additional reservoir of about equal size. By imposing our future requirement on this reservoir system with 75 million gallons daily by diversion of Red River waters from Lake Texoma through a pipeline as shown on the attached map, the salt content in our tapwater in the city would be increased to in excess of 330 parts per million chlorides at the end of a critical drought period. This represents an unsatisfactory condition for a city which has industrial requirements for a water supply.

It appears to us that the proposed investigation by the Federal Government's United States Public Health Service is ideally suited to establish a coordinated pollution control program between the States involved. The stream itself is of such vital economic importance to this rapidly growing area that we strongly urge this investigation be given a high order of priority in order that a comprehensive study can be made and necessary remedial measures taken on a planned and economical basis before flows of this stream must be utilized on a large scale. We are all acutely aware now that water supply is the only deterrent to an almost unlimited expansion in the southwest area. The city of Dallas respectfully urges that the necessary funds be provided for the United States Public Health Service to initiate and carry on this study.

Dallas is grateful to the Government for the work it has done and I wish to thank the committee for the time granted us to appear before you today.

INTRODUCTION OF WITNESS

Mr. PERRY. May I be indulged another minute?

Senator HILL. Go right ahead.

Mr. PERRY. Mr. Bill E. Henderson is here representing the city of Denison and the Denison Chamber of Commerce. He will make a statement on the same matter.

The Senator asks that you give him consideration.

Senator HILL. Come right around and have a seat, sir. Sit right here opposite the young lady, if you do not mind. Will you come around, Mr. Perry, and sit with Mr. Henderson?

Mr. PERRY. Thank you.

CHAMBER OF COMMERCE, DENISON, TEX.

STATEMENT OF BILL E. HENDERSON, MANAGER

ARKANSAS-RED RIVER STUDY

Senator HILL. Mr. Henderson, we are very happy to have you here just as we are happy to have Mr. Perry representing Senator Johnson. I know his great interest in this matter and how anxious he is to get these additional funds. We will be glad to have you now proceed.

Mr. HENDERSON. Thank you, Mr. Chairman.

There are some other witnesses from other States here this morning to support this program. I believe that Mr. Morrison B. Cunningham

from Oklahoma City will give you a more detailed description of what it involves.

I think the widespread support for this program is an indication of the importance of it.

I am here this morning representing several groups; first, the Denison Chamber of Commerce and the city of Denison, Tex. I have a prepared statement for those organizations, expressing their position, which I would like to have appear in the record.

Senator HILL. We will be happy to have that in the record at this point, sir.

(The information referred to follows:)

STATEMENT IN SUPPORT OF A $400,000 APPROPRIATION TO THE UNITED STATES PUBLIC HEALTH SERVICE FOR THE FISCAL YEAR 1959 TO CONTINUE THE ARKANSAS-RED RIVER BASINS WATER QUALITY CONSERVATION STUDY, ARKANSAS AND RED RIVER BASINS, ARK., LA., TEX., AND OKLA.

Mr. Chairman, my name is Bill Henderson, and I represent both the City of Denison, Tex., and the Denison Chamber of Commerce, both of which wish to advocate the appropriation of additional funds to the Public Health Service for the prosecution of a pollution survey of the Arkansas and Red Rivers.

Much has been written concerning the increasing importance of water to the maintenance of our civilization as we know it today. It is not our purpose to add to this general literature, but to speak about our specific situation in the Southwest. The great drought which ended with the rains of 1957 made it dreadfully clear to all of us that without adequate supplies of good water our agriculture would be unstable, industry would shun our area, and our hitherto thriving economy would become static.

The Federal Government has for a number of years recognized this basic need for water and every year appropriations are made for the construction of projects for the conservation and beneficial use of our water supplies. In 1952, the Congress took a further step in the water-conservation program by establishing a project for the study of saline water conversion and has to date advanced several millions of dollars to prosecuite it. It appears to be a logical step in this process to determine if there are means by which waters may be prevented from becoming brackish and thus avoid the additional cost of taking the minerals out. The cheapest and fastest method of getting more water in some river basins may be through the reduction of mineral pollution from manmade and natural sources. The antipollution study which the Public Health Service has initiated on the Red and Arkansas Rivers is this logical step in the Government's program looking to the maximum use of our water supplies for the benefit of the people.

During the hearings before the House committee on this appropriation, the chairman stated that the difficulty of increasing the appropriation for this particular project lay in the fact that it would then be necessary to increase the appropriation for similar projects throughout the Nation. We would like to respectfully submit that this is not necessarily the case, inasmuch as this study on the Red and Arkansas Rivers is a pilot study, a study upon which others may be patterned. It is pioneering in nature and compares in importance with the basic studies of organic pollution made by the Public Health Service on the Ohio River prior to 1940. The Ohio River studies have served as a pattern for subsequent investigations of stream pollution from organic sources. The initiation of studies on other rivers is dependent upon satisfactory progress on this study of the Red and Arkansas.

Though we are not familiar with the reasoning which led the Public Health Service to select the Red and Arkansas Rivers as the subject for this initial study, they could certainly not have picked basins of more importance to the economy of one of the most dynamic and thriving sections of the Nation. With an average annual discharge of 18,420,000 acre-feet at Shreveport, the Red River is potentially a tremendous source of water for municipal, agricultural, and industrial use. Denison Dam creates a reservoir capable of holding 3 million acre-feet of water in addition to its flood-control capacity. At the present time, this lake is too highly mineralized to be suitable for all beneficial purposes. The importance of finding ways and means of abating this pollution cannot be overemphasized. The existence of such a reservoir in a section which at times can be quite arid is a sound insurance against possible drought disaster.

It is understood that to complete the work of this survey in the 4 scheduled years it will be necessary that funds be appropriated at the rate of $400,000 for each of the next 2 fiscal years. An appropriation of $50,000, which we understand the House of Representatives has passed, would dictate such a slow rate of progress that corrective action against the sources of pollution could not be expected for many years to come.

Neither the economy of our great Southwest nor the economy of the country can concede to such a delay. The agencies of the four valley States—Oklahoma, Texas, Arkansas, and Louisiana—are already working on their part of this task, but it is vital that the Federal Government do its part in coordinating the work of the several States and compiling and analyzing the data. This is truly an interstate problem in which the States must look to the Federal Government for leadership.

The Federal Government is spending large amounts for the construction of facilities in the Arkansas and Red River Basins where water quality is an important factor in determining the usefulness of these facilities. Corps of Engineers projects already constructed have cost $436 million and the estimated cost of corps projects under construction is $567 million. The cost of authorized projects is more than half a billion dollars in addition. Assuredly, the expenditure of $400,000 to assure the quality of the water is worthwhile.

We, therefore, respectfully urge your committee, in recognition of the urgent need for this survey and the Federal Government's responsibility for leadership, to recommend that this appropriation be increased sufficiently to permit the expenditure in the fiscal year of 1959 of $400,000 on the antipollution study on the Red and Arkansas Rivers.

GRAYSON COUNTY DEVELOPMENT COUNCIL

Mr. HENDERSON. We have in Grayson County, Tex., what we call the Grayson County Development Council, a group of civic leaders working to better the basic factors to provide for the growth and development of the county. This group, of which I am a member, has also prepared a statement in support of this project, requesting that an appropriation of $400,000 be made to the Public Health Service for the coming fiscal year. I would also like to file the statement of that group with the committee.

Senator HILL. The statement will appear at this point in the record, sir.

Mr. HENDERSON. Thank you.

(The information referred to follows:)

STATEMENT IN SUPPORT OF A $400,000 APPROPRIATION TO THE UNITED STATES PUBLIC HEALTH SERVICE FOR THE FISCAL YEAR 1959 TO CONTINUE THE ARKANSAS-RED RIVER BASINS WATER QUALITY CONSERVATION STUDY, ARKANSAS AND RED RIVER BASINS, ARK., LA., TEX., AND OKLA.

Mr. Chairman, my name is Bill Henderson and I represent the Grayson County Development Council, an organization composed of civic leaders and city officials of the county who are interested primarily in the improvement of the basic factors which would contribute to further development and growth in our county. Grayson County is located in Texas.

The southwestern portion of the United States in general and Grayson County in particular are fast-growing areas. Within a radius of 200 miles of our county, we have four metropolitan cities: Dallas, Fort Worth, Oklahoma City, Tulsa, and a population of well over 2 million persons. For continued growth and development, it is going to be necessary for this area to have a much larger supply of water that would be suitable for three purposes: Municipal, industrial, and irrigation uses.

There is a tremendous source of supply of water in the heart of this area; Lake Texoma, impounded by the Denison Dam. It has a storage of 3 million acre-feet in addition to the flood-storage capacity. It is highly mineralized with the chloride content of the water, taken from a most favorable spot adjacent to the Dam having a minimum of 260 parts per million. This as compared to the maximum standard for chloride content of good water as 250 parts per million.

This pollution is caused from oil-brine deposits and natural salt outcroppings. The amount attributed to each cause has not been determined nor has there been a program of pollution control instituted as yet. We understand that these are the purposes of the study now being made by the United States Public Health Service in cooperation with the States involved.

The city of Denison in Grayson County has been using Lake Texoma water as a source of additional supply for several years. For the right to do this, it is paying the Federal Government some $13,000 a year for storage. The city of Sherman has recently negotiated a contract with the Federal Government for rights to use water from Lake Texoma. The city of Dallas in the recent drought was forced to use water from Red River. In spite of a very large reservoir-development program, the city of Dallas predicts that it will eventually have to resort again to the use of water from Lake Texoma for a sizable amount of its supply. It is logical, too, that other cities in Grayson County and the southwest area will be looking towards Lake Texoma in the not too distant future as a source of potable water.

There has been nearly a half billion dollars spent for multipurpose projects in the Arkansas-White-Red Basin with more planned. The cost of making a study of the pollution of these waters and also instituting a pollution-control program would be sizable but the Government could expect to recover a large portion of the cost through negotiating water storage contracts. The benefits to the people in the areas involved would be fantastic and the cost of the program small proportionally to the money already invested and the extent of the benefits to be derived.

The Grayson County Development Council would like to go on record as expressing its appreciation to the Federal Government for the interest shown and the study that has been initiated on the problem of pollution control of the Red and Arkansas Rivers and to respectfully urge that the requested appropriation of $400,000 for the fiscal year of 1959 be approved in full.

RED RIVER VALLEY ASSOCIATION ENDORSEMENT

Mr. HENDERSON. I would like to report that Mr. Roy Mathias, of Shreveport, La., who is executive vice president of the Red River Valley Association, had planned to be here this morning in support of this pollution survey. However, Mr. Mathias was called home because of the heavy floods in Louisiana at this time.

Mr. Mathias asked me to represent the association this morning and to state that his group which includes representatives of the Red River Basin, from the States of Arkansas, Louisiana, Texas, and Oklahoma, is endorsing this project 100 percent.

There were something like 40 witnesses from this 4-State area in Washington last week who supported this project when hearings were being held in the House and Senate subcommittees for an appropriation to the corps of engineers for the coordinating work in connection with it.

So we do have the support of the Red River Valley Association, and I would like to enter into the record a brief statement from a program of work of the Red River Valley Association.

Senator HILL. We will be happy to have that for the record.

(The information referred to follows:)

RED RIVER POLLUTION SURVEY

The high mineral content of the water of Red River is a deterrent to the full beneficial use of these waters by the people of the valley.

The Public Health Service has undertaken a 4-year survey to determine the sources of contamination of the Red and Arkansas Rivers. The speedy completion of this survey is essential in order that the sources of contamination can be controlled and the waters of Red River be made suitable for all the beneficial uses including municipal, industrial, and agricultural.

We urge Congress to appropriate $400,000 for the fiscal year 1959 for the continuation of this survey.

(Approved as a part of the program of work of the Red River Valley Association at the annual meeting April 8 and 9, 1958.)

OTHER ENDORSEMENTS OF PROGRAM

Mr. HENDERSON. I have three other endorsements of the program. One is a resolution of the North Texas & Southern Oklahoma Area Development Association of Wichita Falls. Another is a resolution from the Waurika Chamber of Commerce, endorsing this study.

I also have a letter from the Sherman, Tex., Chamber of Commerce endorsing this study.

(The information referred to follows:)

NORTH TEXAS AND SOUTHERN OKLAHOMA AREA DEVELOPMENT ASSOCIATION, WICHITA FALLS, TEX.

RESOLUTION

Whereas the North Texas, Southern Oklahoma Area Development Association, covering some 24 counties in the two States, all bordering Red River, will be increasingly dependent on Red River and tributary streams as a source for municipal, industrial, and agricultural water; and

Whereas surveys have been undertaken to determine how the quality of Red River water and tributary streams may be improved: Now, therefore, be it

Resolved, That the board of directors of the North Texas, Southern Oklahoma Area Development Association urge the Congress to appropriate sufficient funds to enable the survey to be completed as expeditiously as possible and specifically to appropriate $400,000 for the fiscal year 1959.

BOARD OF DIRECTORS,
NORTH TEXAS, SOUTHERN OKLAHOMA AREA
DEVELOPMENT ASSOCIATION.
GLEN D. MAGEE, *President.*

Attested:

DAVID CLINTON, *Secretary-Treasurer.*

WAURIKA CHAMBER OF COMMERCE, WAURIKA, OKLA.

RESOLUTION

Whereas the city of Waurika, together with other communities in the Red River Valley, will be increasingly dependent on Red River and tributary streams as a source for municipal, industrial, and agricultural water; and

Whereas the United States Public Health Service has undertaken a survey to determine how the quality of Red River water and tributary streams may be improved: Now, therefore, be it

Resolved, That the board of directors of the Waurika Chamber of Commerce urge the Congress to appropriate sufficient funds to enable the survey to be completed as expeditiously as possible and specifically to appropriate $400,000 for the fiscal year 1959.

BOARD OF DIRECTORS,
WAURIKA CHAMBER OF COMMERCE,
WILLIS C. WORLEY, *President.*

Attested:

MARY LOUISE CONNERS, *Secretary-Treasurer.*

Subscribed and sworn to before me, this 2d day of May 1958.

[SEAL] MYRTLE FUNDERBURK, *Notary Public.*

My commission expires December 9, 1958.

SHERMAN CHAMBER OF COMMERCE,
Sherman, Tex., May 6, 1958.

Mr. BILL HENDERSON,
Manager, Denison Chamber of Commerce,
Denison, Tex.

DEAR SIR: It is our understanding that you will appear shortly before the House and Senate Appropriation Committees on behalf of a resolution asking for an appropriation of $400,000 for study of Lake Texoma pollution.

Because of the growth of our area here in the Southwest, and particularly in the Texoma region, the pollution problem is a common one to your city and ours. As growth of any city around the lake continues we all eventually cast an eye toward Texoma for industrial and municipal water supplies. Heretofore the sight has been unfavorable because of pollution from unknown sources.

Certainly, a determination of the causes of this pollution would be a step toward an eventual source of a good water supply and the improvement of a valuable national resource.

We wish you to know that we fully support your resolution, and feel that a great service will be done by its adoption.

Sincerely,

JOHN A. HIME,
Chairman, Water Resources Committee,
Sherman Chamber of Commerce.
W. S. DORSET,
President, Sherman Chamber of Commerce.

Attest:

DEWAYNE DAVIS,
Secretary, Sherman Chamber of Commerce.

UPGRADING QUALITY OF WATER VITAL TO AREA

Mr. HENDERSON. Mr. Chairman, we feel that this matter of placing greater emphasis on upgrading and conserving the quality in the water of the streams and reservoirs of the Arkansas and Red River Basins is one of the most vital matters facing that area today. Tremendous sums of money are being spent on constructing reservoirs which are certainly needed.

We think that one of the greatest values for money spent could come from improving the quality of this water.

In Lake Texoma we have a tremendous storage of water in addition to the flood-control capacity, but it is not suitable for all beneficial uses because of the high mineral content.

The same thing is true in other areas in the two basins.

We feel that the study which has been started by the Public Health Service almost a year ago is a sound and logical step to determine the sources of pollution and the means of correcting this problem.

We understand that it will take something like a million dollars to complete this entire project in the two basins over a 4-year period. We understand further that $400,000 is needed by the Public Health Service this year for the next fiscal year, and we respectfully urge your committee to give full consideration to this request.

Senator HILL. Thank you, sir. You may be assured that we will do that.

STATEMENT OF SENATOR LONG

I have here a statement from Senator Long in behalf of this same matter urging the appropriation as Senator Johnson has done. I will place that statement in the record at this point.

(The information referred to follows:)

The constant need for an ample water supply is fast becoming one of the serious problems of the State of Louisiana in many sections of the State. This is particularly true in the northwestern section.

The Arkansas and Red Rivers usually have flows of water that are adequate to meet the needs of the region they serve. However, the heavy mineralization of these streams drastically impairs the value of these waters for municipal and industrial water supply, irrigation, and other uses.

Since no accurate factual data are known to exist to establish the degree of pollution furnished by several causes, a study is needed to establish these data in order that sound decisions may be made concerning water quality preservation.

Such a study has been launched by the Public Health Service and it is scheduled for completion during the fiscal year 1961 providing sufficient funds are made available to carry it along according to a preconceived schedule. The objects of this study are to determine various factors which cause a degradation of water quality of the Arkansas and Red Rivers, to identify water of varying quality available for beneficial use, and to formulate plans for the improvement of water quality.

It is understood that funds in the amount of $400,000 are needed to carry out this study during the coming fiscal year and it is accordingly requested that this committee give consideration to making these funds available. It is felt that this proposed expenditure is well justified by the water program that is now in effect in the areas served by these two rivers.

Mr. Bill E. Henderson, manager of the Chamber of Commerce of Denison, Tex., is here this morning to testify in behalf of this appropriation in the name of the Red River Valley Association of Shreveport, La., and in the name of other organizations he also represents. It is a pleasure to introduce Mr. Henderson to the members of this committee.

LETTER FROM SENATOR KERR

Senator HILL. I have here a letter from Senator Kerr transmitting a resolution of the Arkansas Basin Development Association which will be placed in the record at this point.

(The matter referred to follows:)

UNITED STATES SENATE,
Washington, D. C., February 4, 1958.

Hon. CARL HAYDEN,
Chairman, Appropriations Committee,
United States Senate.

DEAR CARL: I am transmitting herewith copies of a resolution adopted by the Arkansas Basin Development Association at their annual meeting on January 28, in which they endorse the program which is now being carried on in the Arkansas-White-Red River Basins.

With kindest personal regards, I am,

Sincerely,

ROB'T S. KERR.

RESOLUTION

Whereas the rate of domestic and industrial water consumption continues to increase at a rate of approximately 3 percent per year; and

Whereas this trend attaches new significance to the problem of pollution control and an ample supply of potable water; and

Whereas the Congress of the United States has allotted funds to the United States Public Health Service for a pilot study in the Arkansas-White-Red River Basins to identify existing sources of pollution, whether natural or manmade, and to devise ways and means of abating this pollution; and

Whereas substantial progress has been made in this study under the skillful and aggressive leadership of Prof. Dwight F. Metzler, of the Kansas State Board of Health, acting as consultant: Therefore, be it

Resolved, That the Congress of the United States be petitioned to continue to make adequate funds available for this study to assure the availability of an abundant supply of potable water now and in the years to come.

CERTIFICATE

I, C. A. Border, secretary of the Arkansas Basin Development Association, Inc., hereby certify that the within and foregoing resolution ia a true and correct copy of such resolution as adopted at the annual membership meeting of said association, assembled at Tulsa, Okla., on January 25, 1958.

Executed this 28th day of January, 1958.

[SEAL]

C. A. BORDER,
Secretary, The Arkansas Basin Development Association, Inc.

Senator HILL. Mr. Cunningham, I believe you are here on the same matter, are you not?

CITY WATER DEPARTMENT, OKLAHOMA CITY, OKLA.

STATEMENT OF MORRISON B. CUNNINGHAM, SUPERINTENDENT AND ENGINEER

RESOLUTIONS OF ARKANSAS BASIN ASSOCIATION

Senator HILL. Suppose you come around at this time, sir.

Mr. CUNNINGHAM. Mr. Chairman, my name is Morrison B. Cunningham, director of public works, Oklahoma City. I would like to have your approval to file my report for the record.

Senator HILL. We will do so, Mr. Cunningham.

Mr. CUNNINGHAM. My statement supports the statements that have just been made by the other speaker.

Senator HILL. Yes, sir.

Mr. CUNNINGHAM. I am also a member of the Arkansas Basin Development Association, where we have members in Oklahoma, Arkansas, and Kansas. They passed a resolution which I would like to leave with you.

Senator HILL. We will put that in the record, sir.

(The resolution referred to follows:)

Whereas the Congress of the United States has approved and authorized the development of the Arkansas River from the mouth to Catoosa, Okla.; and

Whereas the Arkansas River, draining an area rich in natural resources and blessed with a climate that permits open winters, remains as the last great tributary of the Mississippi River to be developed; and

Whereas recent developments in international affairs have prompted a reappraisal of the relative importance of such vital river navigation in some quarters; and

Whereas such developments in world affairs have stressed anew the urgent necessity of geographic dispersion of vital industry supported by an adequate network of inland waterways for our national security; and

Whereas an accelerated defense spending program, accompanied by new and heavier tax responsibilities, makes it even more desirable to develop the natural wealth and a broader and more equitable tax base, and

Whereas it is still the thinking of the Chief of Army Engineers, Maj. Gen. Emerson Itschner, that the original timetable calling for completion of the Arkansas River navigation project by 1973 should be observed: Therefore, be it

Resolved, That the Congress of the United States and the Bureau of the Budget be petitioned to make adequate funds available to the Corps of Engineers for the orderly and expeditious completion of this project; be it further

Resolved, That copies of this resolution be sent to all public officials concerned with such matters.

REPORT OF ASSOCIATION

Mr. CUNNINGHAM. The executive vice president of the Arkansas Basin Development Association has a report. He is attending another hearing this morning. He asked me to file that.

Senator HILL. We will be glad to have all of those for the record.

(The information referred to follows:)

My name is Francis J. Wilson. I am a consulting engineer and executive vice president of the Arkansas Basin Development Association, Inc., with headquarters in Tulsa, Okla.

Our association is tremendously interested in the earliest possible completion of the important studies now being conducted in the Arkansas and Red River Basins by the Public Health Service. We have been interested in this study

since its inception because it will produce the sort of information that is essential to the best utilization of the waters in our basins.

At this time, when much money is being expended on studies of the demineralization of sea water, it would appear that the waters of the Arkansas-Red area, which are not so highly mineralized, would offer even greater possibilities of quality improvement at a much more economical rate than the more highly mineralized sea water.

We are convinced in our area that the results of these studies, which are now in progress, and for which these funds are requested, will increase the available supplies of water for consumptive use by as much as 25 percent. This is a tremendously important factor in the growth of this Arkansas-Red Basins area which has just last year emerged from a devastating drought period.

Our organization is supporting a request for cooperative funds in the amount of $75,000 between the Corps of Engineers and the Public Health Service. We also strongly urge that you appropriate $400,000 which are necessary to carry this study on during the coming fiscal year. Any lesser amounts would delay this project unduly.

Thank you.

LETTER FROM MR. CUNNINGHAM

Mr. CUNNINGHAM. Senator Robert S. Kerr from Oklahoma has previously filed a statement with some other documents.

Senator HILL. They have already been made part of the record.

Thank you very much, sir.

(The information referred to follows:)

OKLAHOMA CITY, OKLA., *May 13, 1958.*

Re Public Law 660, 84th Congress, Public Health Service budget on water-pollution control.

SENATE APPROPRIATIONS COMMITTEE.

MR. CHAIRMAN AND GENTLEMEN OF THE COMMITTEE: My name is Morrison B. Cunningham. I am superintendent and engineer of the city water department, Oklahoma City, Okla. We appreciate the opportunity to speak to you in support of Public Law 660, 84th Congress. We ask that the appropriation be increased to $400,000 for the 1959 budget to accelerate the water quality study on the Arkansas-Red Rivers drainage system. Both rivers are interstate, and form the drainage basin for all of Oklahoma, and part of Texas, Louisiana, Arkansas, Kansas, Colorado, and some of the tributaries extending into New Mexico.

PURPOSE

This study is for the purpose of determining ways and means of obtaining or conserving desirable water quality in the Arkansas and Red River drainage basins. Completion of the study will meet a great need in long-range water-resource development planning efforts.

SCOPE OF PROJECT

Specifically, this study includes:

(1) Investigation of the various factors which cause a degradation of the waters of the Arkansas and Red Rivers;

(2) Formulation of a plan for the improvement of water quality, and the identification of water of various quality available for various uses.

Both the Arkansas and Red Rivers have tremendous quantities of water, but the quality is seriously affected by natural and manmade pollution, with chlorides, for the most part, causing the most serious pollution. Most cities along these streams have had to abandon using the water. Many cities, such as Wichita, Kans.; Tulsa, Okla.; Fort Smith and Little Rock, Ark., have had to abandon their municipal water supplies from the Arkansas, and construct expensive systems elsewhere. As the population grows, and water consumption increases, additional water will be needed.

Also, many cities along the tributaries of these streams face expanded municipal water use, and must construct new sources of supply. If the water in these two streams could be improved, tremendous amounts of money could be saved. For example, Oklahoma City is within 10 miles of the South Canadian River, yet we cannot use the water on account of pollution, particularly the chlorides, which

would have to be reduced greatly. So, at this time, we have no alternative other than the development of a water supply which is more than 100 miles distant from the city.

The north central area of Texas—which includes Dallas, Fort Worth, and other cities—is near the Red River, and if the pollution in the Red River could be reduced, this water would be acceptable, and many millions of dollars could be saved in the construction of water supplies elsewhere.

L. E. Burney, M. D., Surgeon General of the Public Health Service, in a speech at Oklahoma City on November 1, 1957, called our attention to a telegram which was sent on May 8 by President Eisenhower to Mr. Carl Shoemaker, a widely known leader in conservation, saying that "water is one of our most critical resources, and pollution of our waterways is an extravagant waste."

We ask your careful consideration, and recommendation that the appropriation for the water quality study of the Arkansas and Red River drainage basins be increased to $400,000. With these funds, this study could be expedited.

Control of water quality becomes increasingly important as the supply of water must be distributed among constantly increased numbers of people, and industries, together with increased use of water on our farms. The drought has greatly affected water resources in the drainage basins of the Arkansas and Red Rivers, and places an emphasis on a most urgent need for more water. To expedite this water quality study is a most important factor in the development of our natural resources.

When Congress passed the Federal Water Pollution Control Act—Public Law 660, 84th Congress—the responsibility for conducting such studies, as well as a number of other important phases of water pollution control, was placed with the Public Health Service. I should like to say that I think this is the proper agency to handle this work, and coordinate the various phases of the study with other Federal and State agencies.

In the past 38 years, as a water superintendent, I have had occasion to work with the Public Health Service on many phases of water purification and water quality, and have always found this agency very eager to render courteous, efficient, technical service on water problems. In my opinion, this project could be completed with an appropriation of $400,000 under the immediate consideration for the 1959 budget, and a similar amount in 1960, with $100,000 in 1961, which should complete this phase of this work. I am certain this study would make a most important contribution in pollution control, and when completed, it will provide the Southwestern States with a quality inventory of two of its most important sources of water—the Arkansas and Red Rivers.

MORRISON B. CUNNINGHAM,
Superintendent and Engineer, Oklahoma City Water Department.

Senator HILL. Mr. Crayton Walker, executive director of the American Hearing Society.

AMERICAN HEARING SOCIETY, WASHINGTON, D. C.

STATEMENT OF CRAYTON WALKER, EXECUTIVE DIRECTOR

FUNDS FOR RESEARCH AND DEMONSTRATION PROJECT—OFFICE OF VOCATIONAL REHABILITATION

Mr. WALKER. Mr. Chairman, I appreciate the privilege of representing the American Hearing Society here. I am the executive director, and I have with me two associates: One, Mr. Eugene Morrill, the Assistant Executive Director in charge of the program and a member of our technical committee. Also, Dr. Kenneth Johnson, who incidentally, is the executive secretary of the American Speech and Hearing Association. They are supporting this testimony this morning.

Senator HILL. Both Mr. Morrill and Mr. Johnson have filed statements with the committee. We will have their statements inserted in the record at the conclusion of your remarks.

Mr. WALKER. The American Hearing Society is a nonprofit organization. We have over 100 member organizations throughout the

country and nearly 12,000 members. Our objectives are the prevention of deafness, conservation of hearing, and the rehabilitation of these handicapped people.

CONCERN REGARDING FUNDS ALLOWED

Mr. Chairman, we are concerned that only $3,600,000 is included in the President's request for research and demonstration for the Office of Vocational Rehabilitation for fiscal 1959. This is the same amount appropriated for fiscal 1958. We feel that a large amount will be expended for continuing grants, meaning that around $400,000 only will be available for new grants.

There is estimated about 200 new project requests for fiscal 1959. This leaves about 15 that can be really given serious consideration.

The American Hearing Society is interested not only in deafness, but in the total area of communication. That includes aphasics, cerebral palsied, cleft palates, stutterers, and larngectomized.

We feel that the speech impediment of individuals is a very important factor in their employability. For instance, if you have two people with cerebral palsy, the person who has the articulation problem, the communication handicap, has the greater handicap.

We feel that speech and hearing cut arcoss many, many handicaps. The more that we know about the cause of speech and hearing defects, the better we are going to meet his needs.

We wonder about the extent of the problem from the standpoint of the total numbers. We will not go into those kinds of figures, but from the standpoint of vocational rehabilitation, we estimate that about 3 or 4 percent of the persons falling within the purview of rehabilitation do have speech and hearing problems which really have to be dealt with to make them employable or more advantageously employed.

The loss of employment and demotion on the job certainly have to be faced for those whose hearing is becoming progressively worse.

We wonder about the dollar significance of speech and hearing problems in terms of employment. It is estimated there is about a 25 percent loss in income for those handicapped people.

Much has been done in the last 12 years for persons with speech and hearing problems. A great many centers throughout the country and clinics have been developed. The professionals have been coming to this field in droves. As a matter of fact, the number has increased fourfold.

MAJOR RESEARCH NEEDS

I would like to point out three major research needs: First, the validation of present rehabilitation procedures and the development of improved techniques. When you think in terms of hearing aid selection itself, we need further studies to indicate which methods in use today actually work the best.

There is a big difference of opinion in the field in regard to this.

Then we want to know about the on-the-job advantages of a binaural instrument or their disadvantages in certain circumstances. We, with normal hearing, hear with both ears. When you are hard of hearing, your hearing down in both, and when you have one ear amplified, your directional is definitely thrown out of focus.

Second, on research needs, further study is needed to relate certain measures of hearing loss to the socioeconomic handicap that they create. This is important in regard to job placement, compensation for noise-induced hearing loss.

Third, the study of competencies required to discharge professional obligations and the context in which persons are best prepared to acquire them is needed in regard to speech training. We would like to know just how much is needed, what kinds, and under what conditions. We really do not know these things conclusively.

We are all assured that those people, those people vocationally rehabilitated, perform extremely valuable services for our country in peacetime and war. I feel we must utilize our human resources to the very fullest extent.

So far as research and demonstration projects are concerned, they provide information and know-how. We hope that we will continue the process. The interest shown surely is nationwide.

LARGER APPROPRIATION URGED

Therefore, the American Hearing Society goes on record urging the appropriation of $5 million to the Office of Vocational Rehabilitation for Research and Demonstration.

Senator HILL. You would increase the sum by $1,400,000?

Mr. WALKER. Yes.

Senator HILL. You estimate that there will be 200 new projects?

Mr. WALKER. Yes, sir. There are a good many waiting to be considered right now.

Senator HILL. Do you know how many projects they were not able to supply funds for this year because there were no funds to be supplied?

Mr. WALKER. No, sir; but there is a good percentage.

Senator HILL. A good percentage?

Mr. WALKER. Yes.

Senator HILL. If you could get those figures and supply them for the record, we would be happy to have them.

Mr. WALKER. Yes, I will.

Senator HILL. Thank you very much.

(The information referred to follows:)

AMERICAN HEARING SOCIETY,
Washington, D. C., May 13, 1958.

Senator LISTER HILL,
Senate Office Building,
Washington, D. C.

DEAR SENATOR HILL: It was my privilege this morning to appear before your subcommittee to represent the American Hearing Society in its support of increased allocations to the Office of Vocational Rehabilitation for research and demonstration.

In accordance with your request to provide the committee information for the record, relative to the number of requests in fiscal 1958 unable to be awarded due to lack of funds, I have the following information:

The Advisory Council of the Office of Vocational Rehabilitation met in January of this year and approved six projects totaling $176,000, for which there was no money for grant awards. There are presently 50 additional applications to be considered by the advisory committee on Thursday and Friday, May 15 and 16. totaling $1⅓ million.

Since the fiscal year does not end until July 1, it is not possible to give the exact number of project requests, for which money is not available.

I trust the above information will be helpful.

Cordially yours,

CRAYTON WALKER,
Executive Director.

STATEMENT OF AMERICAN HEARING SOCIETY REGARDING THE OFFICE OF VOCATIONAL REHABILITATION GRANTS FOR REHABILITATION RESEARCH AND DEMONSTRATION PROJECTS FOR FISCAL YEAR 1959

The American Hearing Society wishes to express its concern regarding the fact that only $400,000 will be available to the Office of Vocational Rehabilitation for grants for new rehabilitation research and demonstration projects in fiscal year 1959. Approximately 200 new applications for project support will be received by the Office during 1959. Only about 15 of these can be considered because of the limitations in their budget. Of the $3.6 million included in the President's budget for such projects of the Office during 1959, about $3.2 million will be required to support active projects approved in prior years.

We must not lose sight of the extremely valuable service that rehabilitated handicapped persons can perform for our country in peacetime or in wartime. No action taken by the Congress could do more to promote rehabilitation of our human resources than to allot sufficient money to permit the Office of Vocational Rehabilitation to support all the worthy projects submitted for its consideration. Such projects have provided know-how and local facilities which, once established, will continue to rehabilitate people year after year, becoming largely self-supporting through fees and local financial aid.

It has been estimated that 100,000 of the Americans injured in accidents each year are so seriously disabled as to require special services to enable them to hold jobs again. Another 100,000 are disabled just as seriously by illness or from other causes. These statistics, added to the backlog of persons still needing rehabilitation but unable to get it, indicate that about 7 out of every 1,000 of our population could benefit right now from extended vocational rehabilitation services. The wisest and soundest way to set up such services is through research and demonstration. Hence, it is our belief that about $5 million, as a minimum, should be provided to carry on these important programs that otherwise will have to be turned down by the Office.

The special interest of American Hearing Society is, of course, in the rehabilitation of those handicapped with deafness; however, no agency can work long with any of the many types of handicapped persons without experiencing a highly eye-opening revelation of the great need for better services to make all our people productive.

There is one other factor that should be considered, that of the individual happiness of the people of our country. Happiness is, of course, a state that defies statistical analysis. It is safe to say, though, that a productive people is a happy people.

In order to promote better defense of our country through the increase in the number of effective, busy Americans, the American Hearing Society wishes strongly to urge that consideration be given to the larger $5 million allocation of the Office of Vocational Rehabilitation for its 1959 research and demonstration program. Help for the handicapped is an important service to America.

AMERICAN SPEECH AND HEARING ASSOCIATION,
Washington, D. C., May 12, 1958.

Hon. LISTER HILL,
United States Senate,
Washington, D. C.

DEAR SENATOR HILL: I am writing for the American Speech and Hearing Association, the recognized professional organization for persons qualified to work in the field of speech and hearing disorders and for researchers who direct their investigations toward speech and hearing rehabilitation. Since 1925, this association has been concerned with these problems and, on behalf of its 5,000 members, I should like to make the following statement regarding the Office of Vocational Rehabilitation grants for rehabilitation research and demonstration projects for the fiscal year 1959.

The people affected by speech and hearing disorders are part and parcel of the general population in terms of intellectual and physical ability. Their rehabilitation is a very direct way of contributing to the productive manpower resources of our country. For all persons being rehabilitated, whether business executive or common laborer, the improvement of the ability to communicate is a most important part of the rehabilitation program.

The end product of research and demonstration funds is a greater number of rehabilitated persons and a greater degree of rehabilitation for them than has heretofore been possible. The speech and hearing handicapped have received enormous benefit as the result of research. During recent years, there has been a marked improvement in rehabilitation as well as diagnostic procedures for the hearing handicapped as the result of research on hearing examination materials. Studies of the acoustic characteristics of hearing aids quickly produced a beneficial change in the nature of aural rehabilitation and thousands of vocational rehabilitation clients have been helped to greater productivity as a result. Research relative to the rehabilitation of individuals with cleft palate has had an enormous effect on the clinical procedures used and, consequently, on the degree of speech improvement. There has been a great deal of work relating to the rehabilitation of the aphasic, a geriatric problem of ever-increasing proportion. Research on stuttering at some of our major universities has greatly increased the vocational opportunities for the adult stutterer. There are other examples, too numerous to detail here, which demonstrate the relationship between research in the speech and hearing field and its translation into clinical practice, where it has provided important benefits to those requiring vocational rehabilitation.

During the past 7 years, there has been a fourfold growth in the membership of the American Speech and Hearing Association, with a corresponding increase in competent researchers and research programs. The increase in trained researchers in this field would suggest that, with adequate funds, we could expect great improvements in rehabilitation procedures for the speech and hearing handicapped. It would be unfortunate if insufficient funds were available to carry out the needed and possible research in this field.

The $3.6 million included in the President's budget for research and demonstration projects for the Office of Vocational Rehabilitation for the fiscal year 1959 will permit an expenditure of only $400,000 for new rehabilitation research and demonstration projects. Since $3.2 million of the proposed budget must be used in support of continuing projects already approved, only a small fraction of the excellent proposals submitted for 1959 can be given grants. All the handicapped groups will be affected by this lack of funds.

It is estimated that an appropriation of $5 million will be required if the essential research and demonstration projects are to receive support during 1959. The American Speech and Hearing Association urges that this amount be appropriated for the Office of Vocational Rehabilitation for this phase of its important activity.

Yours very truly,

KENNETH O. JOHNSON, Ph. D.,
Executive Secretary.

NATIONAL BOARD OF DIRECTORS OF THE NATIONAL ASSOCIATION FOR RETARDED CHILDREN, INC.

STATEMENT OF MRS. FRANCES H. KING, MEMBER, AND PROFESSOR AT AMERICAN UNIVERSITY, WASHINGTON, D. C.

GROUP REPRESENTED BY ASSOCIATION

Senator HILL. Mrs. King. Have a seat, Mrs. King. We will be happy to have you proceed in your own way.

Mrs. KING. I represent the National Association for Retarded Children. I am on the board of directors. We have with us today our staff consultant on vocation rehabilitation, William Frankel.

Speaking of representation, I suppose we represent 5 million children and adults in the United States. We have about 550 chapters of parents.

I think, before I start, I would like to get some statistics off my mind, because I cannot keep them in my head. They are pretty familiar to most of us.

Out of about 100,000 children, 700 will have rheumatic heart, 350 will have cerebral palsy, about 500 will be crippled by polio, about 200 will be blind; but, out of every 100,000, 3,000 children will be mentally retarded.

LARGER FUNDS FOR NEW PROJECTS REQUESTED

The grant, as it is set up, the amount as it is set up now, is for $3,600,000. This will provide about $3,100,000 for the continuation of earlier projects in research and demonstration, and about $500,000 will go for new projects. We strongly recommend an additional $1,400,000 to be applied toward new projects.

Out of the old number, about 2 out of 114 were purely research in the field of mental retardation, and about 7 out of 11 were for demonstration and research. That is, 9 out of 125, and the $500,000, would cover about 17 new ones. What X would be in that proposition, if it is 9 out of 125, X to 17 does not look like very many. So, what it amounts to, out of about 72,000 rehabilitated in 1956 and 1957, about 1 percent were mentally retarded.

OLDEST RESEARCH PROJECTS

I would like to tell you just a little bit about the two oldest research projects. There is one in Tampa and one in New York. The one in Tampa, the MacDonald Training Center, is oriented toward mentally retarded, but also toward training children with multiple handicaps.

Mental retardation occurs when a child has a handicapping condition. The associated handicap which most often occurs is mental retardation, so that this area is one that is especially good to develop and work in. This is what they are doing at the MacDonald Training Center.

In the New York Center, they are working with what are called trainable children. Of course, they are not children, they are grown. They are in their teens. These are the children which have been formerly considered entirely unemployable. They are still unemployable as far as industry is concerned, but this is an examination into what they can do. It has had very remarkable results.

Research breeds research, and the more you find you can do, the more you can find out that you can do. There are at least five new areas in which research could be done. There are sheltered workshops in institutions, for instance, workshops which try to find out whether, and more particularly, how, children may be rehabilitated and so put back into society in a sheltered condition or in an introductory condition.

POSSIBILITY OF SHELTERED WORKSHOPS IN INDUSTRY

There is no reason why, if this works, that industry itself could not set up a sheltered workshop for these people. The workshop would work not only in being responsible to parents or to institutions or to educational facilities, but to the industry itself because this is one of the things they are discovering.

Then, if these children do work out as they seem to be working out, the same kind of situation that you find between the mental hospital

and the community is a halfway house which provides a dormitory, a sheltered situation for the child and still lets him continue to work, still keeps him out of a pure institution. It is happier for him. It saves the taxpayer money. It is one of the things that would work if they discovered the way to make it work.

Another one, of course, is that the community itself could set up some kind of a sheltered workshop.

Then, the one that seemed most likely at this point is the workshop set up in connection with an educational facility, a school for handicapped children. It would be set up as these children grow older and grow into the age where they can behave as adults.

A sheltered workshop would be one of the things that could be done for these children.

VALUE OF DEMONSTRATION PROJECTS

As I said before, the more you learn about how to do things, the more you find out that there is to find out. These demonstration projects have been very rich in this field. These are the children that in the memory of all of us have either sat at home in lethargic or destructive indolence, and now they are sitting in the public schools in many, many places, attentive and learning what they can learn. This is the thing which they discovered by trying.

These children are growing up now, and we can learn again by trying what these children can do.

As far as demonstration is concerned, I can give you, out of just immediate experience, information on how this works. I stopped at a little Prince George's County community parents meeting the other night accidentally, and they were discussing in their budget about what they should do to set up a vocational situation for their older children. They did not know much about it. They were trying to decide whether, out of their little budget, they should appropriate travel money to send the two board members who were trying to work in the field down to the MacDonald training center to see how it was done so that they could learn how to do it.

They decided that they would invest $500 out of their hard-earned money to send these two gentlemen down to Tampa to see how you work it and what they can learn.

The New York association behaves in the same way. Columbia, for instance, is using this New York workshop as a demonstration project. They are setting out a new handbook of how to set up the workshop and the possible areas in which research could go on to discover new ways to help these children.

As I say, these are the children who were, in my memory, in the concentration camps of the United States. Whether what they can learn can be useful or not depends upon research and demonstration in this field and depends upon how much and how soon we learn that we can do it.

So, I would recommend that the appropriation be extended $1,400,000. This would let a few of the 200 who applied, out of which only 17 were granted, accomplish what they would like to do.

Senator HILL. Did you appear before the House committee?

ORGANIZATION REPRESENTED BEFORE HOUSE

Mrs. KING. No; but someone else did from our organization.

Senator HILL. In other words, your organization was represented before the committee?

Mrs. KING. That is right. We do not wish to complain. We feel that the Senate and the House have been most enlightened in the things they have done within just the last 5 years. This is what leads us to feel that research, since it has done so much, could do so much more.

Senator HILL. You feel that it has done so much, and yet there is a tremendous challenge for it to do so much more.

Mrs. KING. That is right. It is a wide open field.

In many of the other handicapped fields, people know now what they can do. However, they need to be able to find out what can be done here, and there are plenty of people who want to try.

Senator HILL. Any questions, Senator Thye?

Senator THYE. No, Mr. Chairman. I want to commend Mrs. King for coming here. You can be certain that your recommendations and suggestions will have a most sympathetic consideration on my part because I know what you are speaking of.

Senator HILL. We certainly appreciate your presentation very much. Your statement will be made a part of the record at this point.

Mrs. KING. I appreciate the opportunity of appearing here.

(The information referred to follows:)

STATEMENT IN SUPPORT OF INCREASING THE APPROPRIATION FOR RESEARCH AND DEMONSTRATION PROGRAMS, OFFICE OF VOCATIONAL REHABILITATION, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

RECOMMENDATION

Appropriations for the Department of Health, Education, and Welfare for 1959 allow the Office of Vocational Rehabilitation for research and demonstration an item of $3,600,000. This will provide $3,100,000 for the continuation of earlier projects. Five hundred thousand dollars will go toward new projects. We strongly recommend an additional $1,400,000 to be applied toward new projects, thus allowing a total item of $5 million for research and demonstration.

SUPPORTING STATEMENT

A report of the Office of Vocational Rehabilitation, Department of Health, Education, and Welfare, dated February 1958, indicates the following:

Of 114 combined research and demonstration projects approved, only 2 were for the mentally retarded. Seven out of eleven demonstration projects are for the mentally retarded. The total figure for all research and demonstration projects is 125; of this number only 9 are for the mentally retarded.

This figure is certainly disproportionate to the need. It is recognized that per 100,000 population, 700 have rheumatic heart conditions; 350 are cerebral palsied; 300 have polio; 200 are blinded; and 3,000 are mentally retarded. The area of research for the mentally retarded is still in its infancy. Many kinds of problems remain to be explored, particularly in the area of vocational habilitation.

Two of the most outstanding research projects are those currently in operation by the AHRC of New York City and the MacDonald Training Center Foundation at Tampa, Fla.

The New York City project is embarked upon understanding, predicting and controlling those factors preventing the successful rehabilitation of the young adult retarded, utilizing the workshop approach in enabling some of these problems to be solved.

The Tampa project is involved in approaching the problem of the retarded youth with multiple handicaps, with a view toward combining evaluation and training as a means towards solving their vocational problems.

The success of these two research and demonstration projects is giving encouragement and leadership to the workshop approach in the rehabilitation of the adult retarded. Witness the initiation of 95 workshops for the retarded emerging throughout the country, using the above mentioned workshops as their prototype.

Research stimulates new research. New findings need to be tested through additional research and demonstration projects.

Not all answers are available regarding the vocational rehabilitation of the mentally retarded. We need to use every means at our disposal to deal appropriately with this national problem.

Of 72,000 individuals rehabilitated during 1956–57, only 1 plus percent were mentally retarded individuals. Additional research and demonstration projects dealing with the most effective approaches to the vocational rehabilitation of the adult retarded will increase this figure manyfold.

At a conference held in Bedford, Pa., this year, sponsored by the National Association of Sheltered Workshops and Homebound Programs and the National Rehabilitation Association, the theme was The Role of the Workshop in Rehabilitation. National leaders and experts in the field of vocational rehabilitation clearly pointed out the need to explore new ideas in the workshop approach, through additional research and demonstration projects in the following areas.

1. *Sheltered workshop in institutional settings.*—There is a need to establish workshops as a separate part of an institution serving the mentally retarded. In this way it can be demonstrated whether or not this kind of experience will enable the institutionalized retarded to make the transition to the workshop.

2. *Sheltered workshop within an industry.*—There is a need to physically house a workshop in an ongoing industry. In all other respects the workshop remains a sheltered workshop, but there appears to be multiple benefits to be derived by using this approach.

3. *Sheltered workshop and halfway house.*—There is a need to set up workshops with live-in type accommodations in order to permit the severely retarded to function at his maximum in this type setting. The accommodations could take the form of a Y or hostel.

4. *The sheltered workshop as a community resource.*—There is a need to set up sheltered workshops in a community where institutions, public education, vocational rehabilitation, and employers can refer cases for suitable evaluation, training, and subsequent job placement. This type approach would enable the sheltered workshop to serve as the central or focal point through which the cases would flow.

5. *Workshop in relation to an educational facility.*—A new approach to the coordination of the public schools and vocational rehabilitation would be to establish such a facility. It would ascertain the trainable and educable programs required to best aid the adult retarded who is being readied for a sheltered workshop experience.

At a time when research and demonstration is paying off in so many ways, we must broaden and increase the amount of projects which add to our total knowledge about vocational rehabilitation of the mentally retarded.

By approaching the various vocational rehabilitation problems of the mentally retarded in a variety and complexity of ways, we may be able to arrive at answers to questions yet unsolved; and so we will be in a better position to rehabilitate many more adult mentally retarded in our country.

Since the inception of the research and demonstration program in 1954, 130 projects have been approved and activated. Eighteen have been completed. The $500,000 for new projects will be unable to cover adequately the existing and future research and demonstration projects that are needed if we are to do the job that has to be done.

Senator HILL. Mr. Philip R. Mather, president of the American Social Hygiene Association.

AMERICAN SOCIAL HYGIENE ASSOCIATION, NEW YORK CITY

STATEMENT OF PHILIP R. MATHER, PRESIDENT

CONTROL OF VENEREAL DISEASES

Senator HILL. Mr. Mather, we are glad to have you here this morning. We will be glad to have you proceed in your own way.

Mr. MATHER. I greatly appreciate the opportunity to be here. I am a voluntary president of the Social Hygiene Association appearing on the matter of appropriation to the United States Public Health Service for venereal disease control.

To save the time of the committee, I have been authorized to speak not only for my own association, but for two other professional bodies that are interested in the same field: the Association of State and Territorial Health Officers and the American Venereal Disease Association.

As I say, I am simply a layman, but the facts that I am about to give you have been prepared by professionals from official statistics and other reliable sources.

I have been concerned myself about this venereal disease problem for the past 18 years. I have joined the board of American Social Hygiene. I am sure you two gentlemen know about it. However, I still find myself shocked at some of the figures that are in this report which I am about to present to you.

SERIOUSNESS OF VENEREAL DISEASE PROBLEM

Among reported communicable diseases in the United States, gonorrhea ranks second, syphilis ranks fourth. Health authorites estimate there will be as many as 2 million individuals in the United States who have syphilis without knowing it. 135,542 people were discovered to have syphilis in 1959; 216,476 to have gonorrhea. Health officers consider these data as indications of problem rather than as accurate statement. They feel that both syphilis and gonorrhea are seriously underreported in the United States.

In a 1957 study of the VD problem in the United States, health officers indicate their lack of information to judge accurately the extent of the VD problem in their jurisdictions. Only half the States and slightly more than half of the reporting cities are satisfied that the reporting of syphilis from all sources is sufficiently complete to provide a reliable indication of actual incidence and prevalence.

INADEQUATE REPORTING OF CASES

Gonorrhea reporting is spotty and health officers have little confidence in their gonorrhea data. That makes it difficult to tell you what the problem is.

Those health departments registering dissatisfaction with the information they have, point especially to failure of private physicians to report treatment. Pennsylvania compares 90,000 positive serologies from approved laboratories—excluding State, branch, and city

laboratories—in calendar years 1955 and 1956 with 1,702 cases of syphilis reported by private physicians in the same 2 years.

In 1956, private physicians in 1 county in Texas reported only 5 cases of syphilis even though 9,468 serologic tests for syphilis had been performed for the counties private physicians and 503 of the tests were definitely reactive.

MORBIDITY RATES CONFUSING

Further confusing the problem is the fact that low or moderate morbidity rates for a State or city frequently are accepted as reliable indications of extent of the hazard when in reality they conceal extremely high rates in small widely scattered sections of the reporting area.

Based on the relationship of reported primary and secondary syphilis to reported early latent syphilis, one may estimate that we are not finding much more than a third of these isolated groups of people while their disease is in the highly infectious stages.

The chancer and rash of primary and secondary syphilis usually occur within 6 months of infection; after that, if the infection is undetected, the disease is in its early latent stages for up to 4 years.

For the past 4 years, early infectious syphilis has been reported at an average of 6,500 cases per year. Over the same period of time the number of reported cases of early latent syphilis has averaged 21,700 cases per year.

Thus, for every case of early infectious syphilis found over a 4-year period, at least 3 were not found until the case had become early latent. This means not only that more cases were missed than were found, but that those missed were able to go on spreading their infection—and very likely did.

From the 1957 study there is ample evidence that health officers feel insecure in the gains they have made to date in the control of venereal disease. Fourteen States and 19 cities note a rise in venereal disease among the 11–19 age group. Increasingly gonorrhea is reported as a mounting teen-age problem.

Reservoirs of venereal disease exist in most American communities. These reservoirs are of unknown dimensions. VD rates of occurrence and prevalence are often merely a measure of the ladle with which the community's VD control program dips into the reservoir. A small ladle can show only a small number of cases; a big ladle can show a large number.

As more money is spent, it may seem discouraging because they are finding more.

The ladle refers of course to the casefinding effort the State or community is able to launch. This means not only investigators to find the cases but also doctors and nurses to care for them when they are found.

PERSONNEL NEEDS

In 28 States, 2 Territories, and 12 cities over 100,000 population, personnel needs listed by profession in October 1957 included 35 additional physicians, 53 additional nurses, 87 additional investigators, 6 additional lab technicians, 15 additional record analysts, 27 additional health educators.

These figures I have given you are based on questionnaires sent to local and State health officers. What more people do we need to do the job? Figuring only salaries, a minimum cost for the additional VD personnel needed in a little over half the States would call for an increase of more than $1.5 million in the Federal VD appropriations for 1959.

Gonorrhea—the crippler and sterilizer—continues to be a baffling control problem largely because present diagnostic methods are cumbersome, and present methods of treatment may not be getting the penicillin to all of the gonococci, particularly in the female. A great deal of research is needed if gonorrhea is to be brought under control in this country.

Both gonorrhea and syphilis travel swiftly and secretly all over the world. Although there is no estimate of the world reservoir of gonorrhea, the world reservoir of syphilis is estimated at 20 million cases. As each year more and more people travel across international boundaries, it is only fair to assume that the world syphilis reservoir is distributed more and more widely.

This is the important thing that shows why Federal money is needed.

LOCAL CONTROL IMPOSSIBLE

The amazing mobility of the venereal diseases precludes the possibility of any single community or any single State achieving control without parallel action among neighboring communities and States.

In the past year 20 States, 1 Territory, and 17 cities note previously unreported outbreaks of venereal disease. If studied, most of them will be found to involve both adults and teen-agers and most of them, if the personnel were available for adequate contact tracing, would lead to other communities, other States and, in some instances, other nations.

EXAMPLE OF SPREAD OF DISEASES

The largest single epidemic ever charted was reported in Houston, Tex., last year. It shows the sexual linkage of 326 individuals aged 13 to 51 in a cluster of epidemic chains. Seventy-two of the 326 were infected with syphilis, 41 in the highly infectious early stages, and 31 in the later stages.

Senator THYE. Would you mind a question at this point?

Senator HILL. Go ahead.

Senator THYE. Do you have in your statistics whether it was male or female?

Mr. MATHER. I can answer that it was both.

Senator THYE. This is the 11- and 13-year-olds.

Mr. MATHER. I can attempt to get the chart for you. We will be glad to put it in the record if we can supply it in time.

Senator HILL. Suppose you supply that chart.

Mr. MATHER. Yes, sir.

Senator THYE. The chart would indicate whether it was male or female?

Mr. MATHER. Yes. Probably female.

Senator THYE. That would be my belief. That is the reason I asked the question.

(The following additional information was subsequently furnished to the committee:)

Venereal disease morbidity, July to December 1956 and July to December 1957 in continental United States

Time	Primary and secondary	Early latent
Total July to December 1956	3,027	10,495
Total July to December 1957	3,360	10,717
Total July to December 1956-57 increase	[1] 333	[2] 222

[1] 11 percent.
[2] 2.1 percent.

Mr. MATHER. Prophylactic medication was given to 126 in order to avoid the risk of subsequent development of disease among individuals who were known to be exposed. Only 62 were found not to be infected, 40 were not located, and 26 were out of jurisdiction.

SITUATION IN ENGLAND

In England, as in the United States, the VD control picture is beginning to blur and for very much the same reasons. Ambrose King, senior physician, the Whitechapel Clinic, the London Hospital, London, England, says:

> * * * even for syphilis the ultimate outcome remains in doubt. Gonorrhea threatens again to become very serious. * * * The postwar decline in incidence, and the introduction of new remedies, have inspired a false confidence and a move to dismantle some of the organization which has served the public well in the control of these diseases.

That is precisely our situation here. So these three associations with the long names, the American Social Hygiene Association, the Association of State and Territorial Health Officers, and the American Venereal Disease Association are urging a minimum appropriation for fiscal 1959 of $5.7 million. This would not hire the additional personnel needed in slightly over half the States.

If it were used entirely for personnel, it would not add a single dime for the research problems posed in the control of gonorrhea. But $5.7 million in fiscal 1959 will go far to achieve the balance of program necessary to begin to catch up with venereal disease in the United States.

I am deeply grateful to you for this opportunity to present a few facts and some thinking on this serious problem.

Thank you.

Senator HILL. We are most grateful to you, Mr. Mather, for coming here and bringing us this informative statement. We appreciate it very much.

Senator HILL. Now, Dr. Carrol V. Newsom, president of New York University; Dr. Philip J. May, vice president and treasurer of Michigan State University; and Dr. Charles Dobbins of the American Council on Education.

ELIMINATION OF LIMITATION ON INDIRECT RESEARCH COSTS

STATEMENT OF CARROL V. NEWSOM, PRESIDENT, NEW YORK UNIVERSITY; PHILIP J. MAY, VICE PRESIDENT AND TREASURER, MICHIGAN STATE UNIVERSITY; AND CHARLES G. DOBBINS, AMERICAN COUNCIL ON EDUCATION

GENERAL STATEMENT

Senator HILL. Will you gentlemen come around?

You may proceed in your own way, Dr. Newsom.

Mr. NEWSOM. Certainly I appreciate the opportunity of appearing this morning.

Senator HILL. We are happy to have all three of you with us.

Mr. NEWSOM. I happen to be one of the harassed university presidents of which you have been reading. I am president of the New York University which, Mr. Chairman, I believe you know has one of the oldest medical schools in the country.

Senator HILL. No question about that. I concur fully, wholeheartedly.

Mr. NEWSOM. I happen to be here representing the American Council on Education which, as you know, includes 140 educational organizations, 1,021 institutions, among them virtually all of the accredited colleges and universities of the country.

Specifically, I wanted to talk to you briefly, and I shall abridge the statement that I have before me in regard to the rider to the appropriation bill for the Department of Health, Education, and Welfare that would put a ceiling of 15 percent on indirect costs for research grants.

This particular provision, as you gentlemen know, was opposed last year by many educational administrators, but it was approved.

Senator HILL. And as you also recall, this committee in the Senate shared very much the views of the educators.

EFFECTS ON UNIVERSITIES OF LIMITATION

Mr. NEWSOM. That is very good. I happen to realize that.

It is the belief of some of us in the field of higher education that the continuation of this ceiling will have almost ruinous effects in due course of time on the large universities, especially now when we are meeting unprecedented challenges in the field of higher education, and the financial problems of the institutions are probably the most serious in history.

Senator THYE. Doctor, would you mind a question at that point?

Senator HILL. Go right ahead, Senator.

Senator THYE. Doctor, would you say specifically, so that we may have it in detail, what would be the main objections to the rider that you have reference to?

Mr. NEWSOM. Would you mind, sir, if I skip over very quickly here and give you a specific reference to New York University?

Senator THYE. I am sorry I interrupted you.

Mr. NEWSOM. My colleague here may be able to give you some technical aspects from a general point of view, but let me try to tell you something about the effect on New York University.

I think this will give you a picture of just exactly what it means.

Senator THYE. Thank you. I am sorry I interrupted you.

Mr. NEWSOM. That is perfectly all right. This is critical in the entire analysis.

Senator THYE. I would be glad to have these specifics, because you will be more convincing.

Mr. NEWSOM. I would like to be very specific in connection with my own institution. I happen to know it best.

I think my colleague will have a more general statement.

APPLICATION OF LIMITATION AT NEW YORK UNIVERSITY

For the year ending June 30, 1957, direct expenditures on public health grants to my institution were $1,171,711, approximately. If we used audited figures under the Blue Book formula which you gentlemen recognize is in vogue in our dealings with most of these Federal agencies and which we regard as fair and equitable, 36 percent of this amount, and this has been checked very carefully, by Haskens & Sells and our auditors generally, or $419,000 approximately should be paid to us for indirect costs.

As you know, these indirect costs are what we regard as proportionate share of administrative expenditure, use of space, library, and other elements that enter into the contract.

If we apply the limitation of 15 percent which is contained in the rider, we come out with a figure of only $175,000. Right away there you see there is a discrepancy on New York University contracts of a little less than $250,000.

Once in awhile, I find that people refer to these as hidden expenditures and so on. I might say we do not carry such figures in the abstract at New York University.

Such a figure as $244,000 is a very real figure. It is carried on our balance sheets in this connection.

The figure which we get of 36 percent, and I think my colleague may have more to say about that, is in line with what other institutions are likewise spending. Of course, the factors that enter into this direct-cost ratio will vary somewhat from school to school.

Nevertheless, if you look at this compilation by the American Association of Medical Schools, you find that 36 percent, I would say, is somewhere around the medium. There are a few less and some more.

According to the Blue Book formula and audited records following that formula, this is about how that figure works out.

INDIRECT CHARGES FAIR AND EQUITABLE

I would like to raise another point. It certainly is true that New York University wants to be a participant in this type of research. It has been mentioned frequently that medical schools are anxious to be participants. That is certainly true. That is part of the obligation to society of any research program. We believe that it is our necessary responsibility to advance knowledge on all fronts,whether it is in medicine, or atomic energy, or what have you.

So certainly we regard this as part of our responsibility.

It just happens in such an area as public health that the responsibility of Government that has been expressed and accepted coincides with that of higher education. It is the belief of some of us that the very fact that these two responsibilities do coincide has a tendency to cloud the main issue that has arisen here.

It is the belief of some of us that when the Federal Government makes a contract by the medium of a public health grant with a university like New York University, that charges that can be decided to be fair and equitable of an indirect type are just as legitimate as any other charges against a contract.

Senator HILL. It would be part of the cost of the research work?

Mr. NEWSOM. Very much so, Mr. Chairman.

As I say, right within our own institution, if we conduct research internally, we still charge against the books the indirect cost. This is not something that has been developed here rather suddenly to apply it to public health grants or other types of grants.

In our dealings with industry, when we do research for some major industry there is never any hesitation in sitting down with a thorough accounting service and developing the indirect cost. This is done between industry and industry.

As I have siad, there has been no problem in dealing with most of the Federal agencies. The main problem has arisen in connection with the public health grants.

BLUE BOOK FORMULA IN GENERAL USE

Senator HILL. What about the Armed Forces and other agencies?

Mr. NEWSOM. They are using the blue book formula. We have had very successful negotiations and we regard the outcome as being fair and equitable. I just hope, Mr. Chairman, and gentlemen of the committee, that everything possible will be done to remove this ceiling which I believe is arbitrary and without any particular reason.

Thank you.

Senator HILL. Your full statement will appear at this point in the record.

(The statement referred to follows:)

TESTIMONY IN OPPOSITION TO SECTION 207, H. R. 11645 BY CARROLL V. NEWSOM, PRESIDENT, NEW YORK UNIVERSITY ON BEHALF OF THE AMERICAN COUNCIL ON EDUCATION

Mr. Chairman, and gentlemen of the committee, my name is Carroll V. Newsom. I am the president of New York University. I appear before your committee today to present testimony on behalf of the committee on relationships of higher education to the Federal Government, of the American Council on Education. The council membership includes 140 educational organizations and 1,021 institutions, among them nearly all of the accredited junior colleges, colleges and universities in the United States.

As president of the largest private university in the country, I welcome this opportunity to appear before you in order that I may attempt to explain the serious consequences of the rider in the appropriation bill for the Departments of Labor, and Health, Education, and Welfare which states that "None of the funds provided herein shall be used to pay any recipient of a grant for the conduct of a research project an amount for indirect expenses in connection with such project in excess of 15 percent of the direct costs." Although such a provision with respect to indirect costs has been opposed strongly in the past by some of this country's most astute students of educational problems and policy, the limitation in question was approved last year by the Congress. It is my judgment

that continuation of such a policy will prove to be almost ruinous to many of the large universities; officials of such institutions are duly concerned, especially at this very moment when higher education is trying to meet unprecedented challenges and when the financial problems of universities are the most critical in history.

Direct costs of a research project are, as the term implies, those directly related to the achievement of the desired end, perhaps the development of a new drug to dissolve blood clots or a cure for cancer. Indirect costs, on the other hand, represent a project's proper and proportionate share of such institutional expenses as general administration, plant operation and maintenance, use charges—in lieu of depreciation—on buildings and equipment, library maintenance, and so on. It is recognized universally as a principle of sound management that such indirect costs must be calculated and acknowledged with due care or financial difficulties are inevitable. Contractual relationships between industries and between universities and industry give due recognition to such charges.

Many agencies of the Federal Government, such as the Departments of State, Defense, Agriculture, and the Atomic Energy Commission, have for some time recognized the need for adequate reimbursement to institutions for both direct and indirect costs and have evolved accounting procedures for making a fair determination of their amounts. The National Science Foundation has stated emphatically that the Federal Government should adopt a uniform policy of reimbursing educational institutions adequately "for those indirect costs associated with the direct costs of research supported." The recommendation of the National Science Foundation was developed after intensive study at the expressed direction of the President's Executive Order (10521) of March 17, 1954. The so-called blue book formula, enacted in 1947, has widespread use in the determination of a fair evaluation of indirect costs, and this formula has been the basis of most of our negotiations with the Federal agencies mentioned previously.

For the year ending June 30, 1957, direct expenditures on public health grants to my institution were $1,171,711. Using audited figures under the blue-book formula, which we accept as fair and equitable, 36 percent of this amount, or $419,884, should be paid to us for indirect costs. The limitation of 15 percent stated in the rider, to which I am expressing opposition, makes provision for an expenditure to New York University of only $175,528. Thus, New York University really subsidized the research we conducted for 1 year under public health grants to the extent of $244,356. This figure is just as real as any other upon our financial records. How do we handle this deficit? Such deficit financing is rapidly depleting our limited reserve funds, and ultimately is responsible for undesirable and regrettable increases in student fees.

I have stated that our indirect costs at New York University on public-health grants are calculated at 36 percent of the direct costs, considerably more than twice the arbitrary maximum rate specified in the rider. Our computation appears to be generally consistent with the rates determined by other leading medical schools, according to compilations made by the American Association of Medical Schools. It is to be expected that there will be some variation in the rate from school to school, for there are variations from school to school in the values of the factors that enter into the rate; this fact makes virtually impossible any rigid specifications pertaining to the magnitude of the rate in question.

It is admitted that New York University is desirous of participating in the research program, for example, that is subsidized by the public-health grants. We have an obligation to humanity to advance knowledge on all fronts; this we cannot ignore. Rapid advances in this country in medicine and in other scientific fields would virtually cease if the educational institutions of the United States refused to accept this traditional obligation. The Federal Government likewise has accepted broad responsibilities for the welfare of our citizens. It happens that the acknowledged responsibilities of government and the obligations of higher education coincide in such a field as public health. I submit, Mr. Chairman, that this fact would hardly seem to be sufficient justification for legislation against the payment of certain charges on contracts made by government with universities if such charges can be demonstrated to be a just and proper part of the contractual agreement; this is especially true now when educational institutions are finding it almost impossible to raise funds to cover such charges.

I hope sincerely that the 15-percent limitation on indirect costs will not be perpetuated as a part of fiscal policy.

AMERICAN ASSOCIATION OF LAND-GRANT COLLEGES AND NATIONAL ASSOCIATION OF STATE UNIVERSITIES

Senator HILL. Suppose we hear from Dr. May and then any questions.

Mr. MAY. Mr. Chairman, I am vice president and treasurer of Michigan State University, the land-grant university in Michigan.

Senator HILL. You have another institution at Ann Arbor?

Mr. MAY. There is another one but we refer to it as slightly southeast.

I am appearing before your committee today, of course, to present the testimony on behalf of the American Association of Land-Grant Colleges and State Universities and the National Association of State Universities.

The combined membership of the Land-Grant Association and the National Association of State Universities includes 90 institutions which as a group award annually more than half of all advanced degrees in science in this country, and a considerably higher proportion in the healing arts.

The same universities which I represent carry on, and expect to carry on, a substantial portion of the research in the health field conducted for the Department of Health, Education, and Welfare by the colleges and universities in the United States.

I am authorized to speak on behalf of both groups in opposition to section 207 of H. R. 11645 which would have the effect of placing the maximum limit of 15 percent on the amount that can be paid for indirect expenses incurred by colleges and universities on research projects for which the Department of Health, Education, and Welfare may contract.

After I have presented a brief statement orally, I will attempt to answer any questions which members of your committee may wish to raise.

Perhaps you will recall that a year ago I presented testimony on this same subject for the American Council on Education and the two associations I represent today.

OPPOSITION TO 15-PERCENT LIMITATION

Your committee accepted our arguments in opposition to the 15-percent limitation and removed the rider from the bill. Unfortunately, however, the conference committee working on differences between the Senate and the House reinstated the 15-percent limitation. Despite this unfavorable action, the members of the associations continue of the same belief, because no evidence has been adduced to contradict the representations made previously to this committee.

I would like, in a few minutes this morning, to explain why the opposition to this rider continues. First, the 15-percent limitation means that the university undertaking research for the Department of Health, Education, and Welfare will be subsidizing in part the Government's research programs. This forced subsidization of Government research is in direct conflict with principles established in the National Science Foundation report which was developed at the express direction of the President's Executive Order 10521 of March 17, 1954.

NATIONAL SCIENCE FOUNDATION REPORT

This report recommended the establishment of policies and procedures which would promote the attainment of general national research objectives and realization of the research needs of the Federal agencies while safeguarding the strength and independence of the Nation's institutions of higher learning.

Furthermore, the report placed strong emphasis on the principle of full reimbursement of all costs, both direct and indirect. The report was submitted to the Director of the Bureau of the Budget in 1955 and was accepted by the Executive Office of the President in early 1956.

At the present time a number of bills have been introduced by Members of the Congress to aid education. One of these bills is authored by the distinguished Senator who heads this committee. It seems a little incongruous for Congress to be considering bills to extend Federal financial aid to education and at the same time to have provisions in H. R. 11645 which would require universities to subsidize Federal Government research.

Having made the statement that the 15-percent rider would result in subsidization of Government research by colleges and universities, I wish to give you a few figures from my own institution in support of this statement. When we refer to the need for reimbursement of indirect expenses, we are talking about more than just a recovery of the expenses of a few administrative offices.

MEANING OF "INDIRECT EXPENSES"

The term "indirect expenses" generally includes a charge for the use of the laboratories in which research is conducted, the cost of heat, lights, gas, power, and maintenance of such facilities.

Also included is the cost of workmen's compensation insurance, liability insurance, sick leave, and other fringe benefits which are a normal part of our commitments to staff members, whether engaged in teaching, institutional research, or governmental research.

Also included are the expenses of departmental administration, information services, and the administration of graduate programs which are so heavily involved in the Government's research program. Having identified the kinds of indirect expense for which full reimbursement is sought, let me now place a price tag on these services.

(The information referred to follows:)

MICHIGAN STATE UNIVERSITY

Statement of indirect expense

General administration: President, vice presidents, administrative assistant for public relations, board of agriculture, legal adviser, secretary, deans, and department heads	$1, 758, 537
General expense: Audit, central stenographic, business office, inventory, mailing, personnel, photographic, purchasing, tabulating, telephones, health services, information services, institutional reports, placement service, and library	1, 237, 087
Maintenance and operation of plant: Maintenance of buildings and grounds, engineering, fire protection, police protection, heat, light, power, insurance, workmen's compensation, sewer service, stores, etc	2, 128, 050
Use charge, buildings and equipment:	
Use of buildings at 6 percent of cost	2, 269, 707
Use of equipment at 6⅔ percent of cost	600, 650
Subtotal	2, 870, 357
Total indirect expense	7, 994, 031
Total expense	33, 430, 278
Less indirect expense	7, 994, 031
Total direct expense	25, 436, 247
Percentage indirect expense to direct expense	31. 43

COST TO MICHIGAN STATE UNIVERSITY

Mr. MAY. This adds up to $8 million, but, when you figure it, it comes down to 31 percent compared to the 15 percent which the rider provides for.

From these statistics it is clear that, for every research dollar accepted by Michigan State University from the Department of Health, Education, and Welfare, the University must be prepared to add 16.43 cents of its own funds if the 15-percent limitation remains in the appropriation bill.

DETERMINATION OF FAIR REIMBURSEMENT

The next point which I wish to make with this committee is that, if the principle of full reimbursement of cost is accepted, then it fol-

lows that each agency should be given the administrative responsibility of determining what constitutes fair reimbursement of such indirect expense without any arbitrary legislative limitations.

Colleges and universities engaged in research know from experience that Federal agencies sponsoring research projects have been zealous in guarding against the waste of Federal funds through proper evaluation of the cost factors involved. It is our belief that the Department of Health, Education, and Welfare should be given the same responsibility in this matter as is now vested in other agencies of the Federal Government.

INTERAGENCY COMMITTEE

I feel certain that your committee is aware of the fact that an interagency committee was established nearly a year ago by the Bureau of the Budget to develop procedures which could be applied by each university in developing a fair rate for reimbursement of indirect expenses for use by all agencies of the Federal Government.

I am a member of the university group which has been meeting with this interagency committee. I have been in Washington six times since January to meet with this group.

During all of our discussions, the principle of full reimbursement of indirect cost has not been questioned by Government officials. Neither has there been any effort by university representatives to ask for adoption of procedures which would result in the Government paying more than its fair share of indirect expenses related to our teaching and research programs.

It is our belief that provisions of H. R. 11645 should not negate the efforts of the Bureau of the Budget, the General Accounting Office, Department of Defense, National Science Foundation, Atomic Energy Commission, Department of Health, Education, and Welfare, and Treasury Department to find a satisfactory solution to this problem.

I respectfully remind the committee that American colleges and universities are highly complex organizations which have accepted their responsibility for the training of scientific personnel and the conduct of basic research so vital to this Nation.

ACCEPTANCE OF RESPONSIBILITY

We have accepted this responsibility without any desire or suggestion that the services rendered should result in a profit to our institutions. We believe that it is not too much to ask the committees of Congress to eliminate the 15-percent limitation from the appropriation bill of the Department of Health, Education, and Welfare in order that the Department's administrative offices may contract for research on the same basis as other Government agencies.

In conclusion, I wish to thank the chairman and his committee for the opportunity of presenting this brief statement. We are fully aware that last year you and the Senate removed the objectionable 15-percent limitation from the appropriation bill, and trust that the colleges and universities will again have your support.

Senator HILL. I think I can tell you that you will continue to have our full support.

Mr. MAY. Thank you, sir.

Senator HILL. Did you gentlemen appear before the House committee?

Mr. DOBBINS. There was no opportunity to appear, that we know of.

Senator HILL. Did you address a communication of any kind to them; do you know?

Mr. DOBBINS. I cannot answer that.

Senator HILL. Is there anything you would like to add, Dr. Dobbins?

Mr. DOBBINS. No, sir.

Senator HILL. We appreciate your testimony. I think you made out a strong case. I hope that you take any steps that you can in connection with our friends with whom we have to go to conference.

Mr. MAY. We hope that there will be a more friendly attitude by the House of Representatives. We have been given informal indication that, perhaps, there will be.

Senator HILL. We certainly appreciate your being here, and I think I can assure you, you will continue to have our support. You have been most helpful this morning. We deeply appreciate it.

Senator HILL. We are happy to have with us a delegate from Alaska, Mr. Bartlett. We are always to have you here, Mr. Bartlett. We will be glad to have you now proceed in your own way and make any statement you see fit, sir.

FUNDS FOR ALASKA ITEMS

STATEMENT OF HON. E. L. BARTLETT, A DELEGATE FROM THE TERRITORY OF ALASKA

HEALTH AND RELATED NEEDS IN ALASKA

Mr. BARRETT. Thank you, Mr. Chairman. I am always glad to appear before this committee because it has been so understanding of health and related needs in Alaska. I do not have a prepared statement, Mr. Chairman. I shall not go through each item of the several items in the budget requests because you have those figures in front of you, but I should like quite briefly to refer to the general subject.

Actually, I think that this is one of the most dramatic stories in American medical history. It is a combination of devotion, professional skill, and money, the money having been supplied by you gentlemen and your counterparts on the House side during the last several years.

DRAMATIC PROGRESS AGAINST TUBERCULOSIS

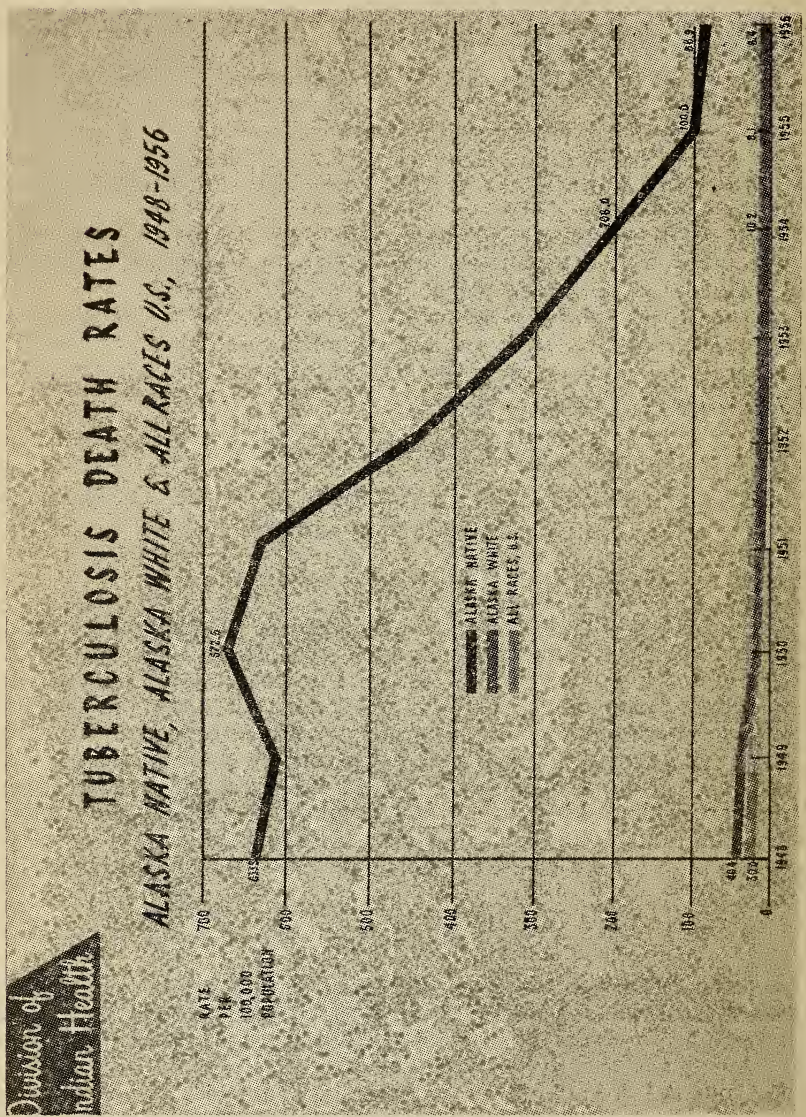
When you started to appropriate money for health needs in Alaska, particularly the needs of the native citizens, that is to say, the Indians, the Eskimos, and the Aleuts, we had the most dreadful tuberculosis situation in the United States there.

Let me tell you what is happening. In 1954, the tuberculosis mortality rate per 100,000 people in Alaska was 329. In 1956, if you please, only 2 short years, that rate had declined to 88.9 per hundred thousand. Marvelous progress has been made since then.

I hand you for your inspection a chart that shows most graphically how the curve has gone downward.

Senator HILL. We will place this in the record at this point.

(The information referred to follows:)


Division of
Indian Health
TUBERCULOSIS DEATH RATES
ALASKA NATIVE, ALASKA WHITE & ALL RACES U.S., 1948-1956
RATE PER 100,000 POPULATION
700
600
500
400
300
200
100
0
572.5
708.0
100.0
ALASKA NATIVE
ALASKA WHITE
ALL RACES, U.S.
1948
1949
1950
1951
1952
1953
1954
1955
1956

PROGRESS DUE TO SUFFICIENT FUNDS

Mr. BARTLETT. A very substantial part of the entire appropriation for health needs of Indians throughout the United States has gone to Alaska, but it has done the job. Only the other day Dr. Shaw, of the Public Health Service, was telling me that out of the more than 500 hospital beds in Alaska for the care of the tubercular, only something over 300 are occupied.

It is true that there are 150 now in the Government hospital in Tacoma, but vacancies are occurring. The Public Health Service intends to start an intensive campaign, insofar as possible, eye, ear, nose, and allied diseases among these native people.

Mind you, 10 years ago, this start was made from scratch, and we thought then in a generation perhaps the tuberculosis problem would be conquered insofar as it can be. We were pessimistic.

The fact is that we will have arrived at that long before that time. I think when that generation will have elapsed, we will have discovered that generally the health of these Alaska citizens of the United States is not too far below the par of their white brothers.

ARCTIC HEALTH RESEARCH CENTER

I should like to comment here, Mr. Chairman, on the simply splendid work which has been done by the Arctic Health Research Center based at Anchorage. Those scientists are about the most dedicated group of people with whom I have come in contact.

We had not actually done much by way of scientific investigation in the Arctic until the center was established. It is doing a first-class job, not only for the benefit of Alaska, but for the benefit of the Nation.

I say that mindful of the fact that so many of our people in the armed services are benefiting and will continue to benefit from the work of this scientific group.

TERRITORIAL HEALTH GRANTS

Of course, it is needless for me to comment at any length upon the very wonderful cooperation which has been given by the Federal Government to our Territorial health department in grants, and so forth, which have enabled that department to function much better than otherwise would have been the case.

MENTAL HEALTH PROGRAM

Finally, I want to refer, Mr. Chairman, and Senator Thye, to the mental health program. You are asked now to appropriate $6½ million for the construction of a mental health institution within Alaska. That is the authorized amount contained in the Alaska Mental Health Act, the authorizing law.

In addition, there is a mental health payment to Alaska in the sum of $1 million. For the fiscal year 1960 that would decrease to $800,000. In 1961 it will also be $800,000. Thereafter, it will drop $200,000 until the Territorial government takes up the entire financial burden for caring for these people. I will state here, although that I do not need to remind you, that the reason the Territory did not provide this service before to its mentally ill, is because it was not permitted

to do so by the Federal Government. The Federal Government retained all authority.

I am happy to relate to you, Mr. Chairman, and Senator Thye, that thanks to the understanding and cooperation of Representative Fogarty who has always been such a great friend with respect to health problems generally, and I know especially in Alaska, on the House committee, every penny asked for by the Bureau of the Budget for Alaska has been granted.

I would like to express the hope that the same result will be had on this side.

Senator HILL. In other words, you would like for us to approve what the budget and the House have done?

Mr. BARTLETT. I find myself in a very strange situation. Generally, Mr. Chairman, when I come before an appropriation committee I ask for more money than is in the budget. Not so this time.

Senator HILL. I do not think you will find Senator Thye or myself other than sympathetic with your request. Is that not right, Senator Thye?

Senator THYE. That is certainly true.

Senator HILL. You will find we are very sympathetic to your request.

Mr. BARTLETT. I am most grateful to you.

Senator HILL. We are grateful to you for having come over here to be with us.

NATIONAL ORTHOPEDIC AND REHABILITATION HOSPITAL, ARLINGTON, VA.

STATEMENT OF ARTHUR E. WHITE, M. D.

FUNDS FOR SPECIAL PILOT PROJECT UNDER SECTION IV (B) OF VOCATIONAL REHABILITATION ACT

Senator HILL. I do not like to keep doctors waiting. In fact, if I had realized you were here in the room, I would have called you sooner, to be frank about it.

Dr. WHITE. Thank you.

Senator HILL. You are with the National Orthopedic and Rehabilitation Hospital in Arlington, Va.

Dr. WHITE. That is correct.

Senator HILL. Doctor, we are happy to have you here, sir.

Dr. WHITE. I wish to thank you for permitting me to appear before you and to discuss the National Orthopedic Rehabilitation Hospital which was formerly called the Anderson Orthopedic Hospital in Arlington, Va.

PREPARED STATEMENT

I have a prepared statement which I would like to file for the record, as well as a copy of our budget for next year.

Senator HILL, Your statement and budget will be made a part of the record at this point.

(The information referred to follows:)

STATEMENT BY ARTHUR E. WHITE, M. D.

I wish to thank the chairman and the members of this committee for permitting me to appear before you and briefly discuss the National Orthopedic and Rehabilitation Hospital, (formerly the Anderson Orthopedic Hospital), Arlington, Va.,

a nonprofit institution for the treatment and restoration of physically disabled persons.

I am Dr. Arthur E. White, a diplomat of the American Board of Physical Medicine and Rehabilitation. I have been the medical coordinator of this rehabilitation center for nearly 2 years. The new Y-shaped, five-story addition to our rehabilitation center will be completed and ready for occupancy this summer. Only one floor will be devoted to rehabilitation beds. The other floors will, in a large measure, also be devoted to rehabilitation activities, and will include psychological evaluation, social service studies, physical therapy and occupational therapy clinics with rooms to teach the activities of daily living. Speech therapy will be provided and many shops will be placed in operation to determine the patient's physical tolerance, aptitudes, and capacities to be restored to a productive economic status. Likewise, there will be adequate facilities for the care of rehabilitation service outpatients. Examining rooms, essential offices, conference room, waiting rooms, record rooms, kitchen, and dining-room space will also be provided.

Thus, it becomes clear that we have constructed this building so that it may be a continuing community rehabilitation demonstration center which can, with slight modification, be applicable to other communities throughout the United States. To continually explore and evaluate the broad aspects of rehabilitation require more than average space, equipment, and personnel, but in so doing, it permits a careful analysis of the problems and its coordination with others that may be working in this field.

As one continues to develop the purpose of this demonstration rehabilitation center, it becomes even more clear that it cannot be effectively perpetuated as a project. We believe in the good faith of the United States Congress and with their passage of section 4 (b), Public Law 565, 83d Congress which does provide for governmental support, including room, board, and service. We have proceeded with our philosophy of broad community support and with donations of land, building material, labor, etc., did, to a large degree, erect our present rehabilitation structure, which with its equipment, will be worth approximately $2 million. The capacity of the community did not permit its entire completion. Therefore, it was necessary to borrow $350,000 from the banks, for members of the board of trustees to sign notes for a lesser amount, and to secure a Hill-Burton grant which will, over a 3-year period, total approximately $200,000.

These figures reveal that the completion of this rehabilitation center represents roughly an outlay as follows:

Community effort (70 percent)	$1, 400, 000
NORH self-financing (20 percent)	400, 000
Hill-Burton grant (10 percent)	200, 000

As one continues to develop the history of the National Orthopaedic and Rehabilitation Hospital, formerly called the Anderson Orthopaedic Hospital, it becomes increasingly more evident that this is not a new development by Dr. Engh but a philosophy which he has carefully developed over the years. The active leadership of the Arlington Junior Chamber of Commerce, in the development of community support and participation in the building and support of the present hospital, won them both State and national awards for the best community project.

We feel there is permanency through broad community participation and in using the patient's own doctor. He maintains the doctor-patient relationship, works with the center's rehabilitation team and calls in the professional consultants of his own choice. The community's guided participation reduces materially, the overall cost of the community's rehabilitable patients. The continuation of professional supervision by the patient's own doctor through the rehabilitation phase materially accelerates the patient's return to his or her job and also stimulates the family physician in the technical aspects of psychology, social studies, physical and occupational therapy, prevocational, vocational and workshop activities. Thus, as our philosophy expands more and more doctors become aware of their total medical responsibility; that is to restore their patients to their maximum physical and economic effectiveness in the shortest possible period of time.

It is generally agreed that the average person cannot carry the entire economic burden when rehabilitation activities become necessary. This same consideration can be extended to the community, county, State, or even the Federal Government, unless an acceptable, practical program is developed.

We believe we are developing such a program through broad community participation and support, and by the patient's own doctor being in control, not only during the patient's acute injury or illness but in the continuation of this relationship through the rehabilitation phase and the patient's return to the job. We know, and it is unanimously agreed by those that have made psychological studies, that the success in rehabilitation is based primarily on the period of time that has elapsed since the onset of the disability, rather than its severity.

It may be said that the patient that has experienced a severe or catastrophic disability will go through the following phases unless active rehabilitation measures are taken: (1) bewilderment (how or why did it happen to me), (2) depression (thoughts of self-destruction), (3) questionable hope (do I or don't I have a future place in society), (4) frustration (the development of emotional instability) and finally, (5) demanding dependency (my family and the Government owes me everything. I have suffered too much).

Rehabilitation, begun early, analyzes the patient, not from his disability, but from his remaining potential and in so doing, develops a plan whereby the patient can understand his potential and under the guidance of the rehabilitation team have an attainable goal, which he can reach. Wishful thinking and "do-gooder" actions is a poor substitute for competent rehabilitation know-how.

We have carefully assembled a qualified rehabilitation team. Now we are preparing to move into our greatly expanded rehabilitation facility. We feel obligated to the Congress, the medical profession, and to the people in Washington, D. C., metropolitan area to demonstrate that the community, the medical profession and the community rehabilitation center can work effectively and in harmony to restore our disabled citizens to their maximum physical and economic productivity. Thus they become the taxpayers instead of tax burdens. Everyone benefits, including the Government.

Following the reading of these notes, I would like to submit the budget requirements in the amount of $434,602.17 for the National Orthopedic and Rehabilitation Hospital, Arlington, Va., for the calendar year 1959.

In conclusion, the $434,602.17 budget which I am submitting at this time is based upon our past costs and experiences, information gained from other rehabilitation centers, and conferences with members of the OVR staff. They have been most cooperative and helpful and I take this opportunity to thank them.

It is realized there are many rehabilitation centers but all others, insofar as I know, have been created to care for the rehabilitation patient after he has left the atmosphere of a hospital. The National Orthopedic and Rehabilitation Hospital under section 4 (b), Public Law 565, 83d Congress, is unique in that, for the first time, the initial doctor-patient relationship is not broken. From initial injury or illness to the patient's return to his job, both he and the doctor of his own choice are exposed to and benefit from this philosophy of rehabilitation.

PROPOSED BUDGET FOR THE PERIOD JANUARY 1, 1959, THROUGH DECEMBER 31, 1959

Project: The National Orthopedic and Rehabilitation Hospital (formerly Anderson Orthopedic Hospital), Arlington, Va.; pilot demonstration rehabilitation center for the metropolitan area of Washington, D. C.

Gross requirements:	
Schedule A	$171, 131. 00
Schedule B (includes schedule A)	352, 863. 50
Schedule C	36, 410. 67
Schedule D	15, 400. 00
Schedule E	50, 000. 00
Total	454, 674. 17
Anticipated revenue: Schedule F	20, 072. 00
Net requirements	434, 602. 17

Schedule A—Personnel

Medical coordinator and executive director	$18, 000
Administrative assistant to medical coordinator [1]	7, 000
Chief psychologist	10, 000
Psychology clerk	2, 400
Chief physical therapist	6, 500
Staff physical therapist	5, 200
Chief occupational therapist	6, 500
Staff occupational therapist	5, 200
Chief social worker	6, 500
Chief, prevocational services	6, 500
Assistants to chief prevocational services, 2 at $3,600 per annum	7, 200
Chief, nursing service	6, 800
Assistant to chief of nursing service	6, 000
Rehabilitation nurses, 8 at $4,800	38, 400
Registered record librarian	4, 800
Record room dictaphone operator	3, 600
Medical secretaries, 3 at $4,200	12, 600
Speech therapy, part time	3, 600
Chief accountant-statistician	6, 800
Bookkeeper	4, 200
FICA ($2,660) and insurance ($671)	3, 331
Total personnel expense	171, 131

[1] A person well versed in public relations, who has had the administrative training, the ability to speak before any group, to maintain close relationship with the press, to develop harmonious relationship with all vocational counselors and agencies interested in rehabilitation and to develop, coordinate and direct a community volunteer program.

Schedule B—Room, board, and services for in-patients

[To include personnel, see schedule A, all normal services, routine laboratory, and X-rays]

(1) (*a*) Estimated cost per diem	$30. 00
(*b*) Per diem cost for Rehabilitation personnel	8. 86
(*c*) Adjusted cost per occupied bed per day	21. 14
(2) 10 Rehabilitation beds for indigent patients to be totally subsidized: 10 beds×365 days=3,650 patient days; 3,650 patient days×$21.14	77, 161. 00
(3) Authorization for 5-day rehabilitation evaluation as in-patient; it is estimated 10 beds will be continually occupied	77, 161. 00
(4) Patients referred by State vocational rehabilitation and other agencies; difference to be paid from the grant; estimated 5 beds to be continually occupied at the present rate of $17.60 per day: 5×$17.60=$88 per day paid by agency; $88×365 days=$32,120; 5×$21.14 adjusted per diem cost×365 days=$38,580.50; difference to be paid by the grant	6, 460. 50
(5) Professional, special diagnostic procedures and braces for rehabilitation in-patients: Estimated annual average number of in-patients, 421 at $50 per patient	21, 050. 00
	181, 732. 50
Plus schedule A	171, 131. 00
	352, 863. 50

Schedule C—Out-patient treatment, costs

[Based on 251 working days per annum, 6 new patients per working day, and an average of 18 treatments per case; ⅓ of the total treatments to be paid from the grant]

(1) Further calculations from 75 rehabilitation centers reveal, where personnel is included, the costs to be per treatment $0.60, per ½ day (3 hours) $1.50, and per day (6 hours) $3. Calculations: 251 working days×6 new patients each day=1,506 patients per year. 1,506 patients×18 treatments=27,108 treatments. Take the middle treatment cost $1.50: 27,108 treatments× $1.50=$40,662. ⅓ of cost to be borne by the grant	$13, 820. 67
(2) Professional, special diagnostic services and brace service: 1,506 patients at $15 per average cost per case	22, 590. 00
	36, 410. 67

Schedule D—Other expenses

Consumable supplies	$3, 600
Travel	2, 500
Community volunteer program development and public relations	2, 500
Textbooks and periodicals and related materials for rehabilitation workshops	1, 500
Service training, professional institutes and research	3, 500
General expense, miscellaneous	1, 800
Total	15, 400

Travel is considered mandatory to evaluate developments made by others, for the exchange of ideas and to attend professional meetings and conferences which have a direct bearing in the field of rehabilitation.

The creation of a volunteer program is not especially difficulty but to organize and direct such activities so that they become progressively more efficient and effective requires a controlled source for both its direction and analysis. Otherwise various cliques may develop and emotional factors, rather than reason, may impair the community's effective support in a vital health field which is rapidly becoming a national problem of great magnitude.

Likewise, consideration has been given to community participation which, if properly led and effectively organized, can be a most useful reserve in local and national catastrophes which may never come but which, to ignore, is folly.

Research in the field of rehabilitation is a vital and continuing process and is an essential part of scientific progress.

Schedule E—Equipment, $50,000

(See attached itemizations)

Summary of equipment:	
Brace shop	$4, 655. 28
Physical therapy	1, 777. 00
Occupational therapy	9, 630. 78
Vocational shops	21, 605. 79
Dietetic department	6, 294. 00
Maintenance	3, 062. 15
Overhead bed frames, 35 at $85	2, 975. 00
	50, 000. 00

Brace Department—Total equipment and supplies as of May 9, 1958

Total machinery	$1, 817. 00
Total corsets	1, 102. 53
Total braces (prefab)	1, 335. 75
Total leather and cloth	400. 00
Total	4, 655. 28

ADDITIONAL EQUIPMENT NEEDED FOR THE BRACE DEPARTMENT

(Part of this probably can be obtained through Government surplus.)

1. Shoe sole stitching machine (1).
2. Shoe finishing machine (1).
3. 12-inch slip roll machine (1).
4. 14-inch drill press with floor stand (1).
5. 10-inch drill press, bench model (1).
6. Cylinder type sewing machine (electric) (1).
7. Workbenches (30 by 72 inches) wood top, tool racks and drawers (2).
8. 5-inch swivel type machinist's vises, hardened jaws (2).
9. Pedestal type 2-horsepower, 3-phase buffer and grinder, 1,800 revolutions per minute (1).
10. 9-inch screw cutting metal lathe, 42-inch bed and stand, 3-jaw chuck and collets (1).
11. Counter with drawer below (1).
12. Metal stools (2).
13. Set acetylene welding hose and tips and gages with cutting head (1)

Physical medicine equipment—A. J. Preston Corp., 175 5th Avenue, New York, N.Y.

Code	Equipment	Number	Cost
PC-2307A	Digitator hand exerciser	1 dozen	$15.00
PC-2307C	Digitator hand exerciser (child size)	6 each	9.00
PC-1111	Portable galvanic faradic sinusoidal generator	1	275.00
PC-1191	2-compartment tray—Plexiglas (each compartment 13 by 6 by 4 inches.	1	14.00
PC-1288	Bed cradle, thermostatically controlled, 36 by 17 by 20 inches	1	55.00
PC-2011A	Leather ankle cuff	1	8.50
PC-2011W	Leather wrist cuff	1	7.50
PC-2012	Leather thigh cuff	1	9.00
PC-2014	Shoulder weight bag	1	8 00
PC-2015	Scapula strap	1	8.00
PC-2016	Safety walking belt	1	23.50
PC-2029	Foot drop boot with bar and collars (adult)	1	19.00
PC-2031	Foot drop boot with bar and collars (child)	1	17 00
PC-2110	Guthrie Smith suspension apparatus, standard model	1	295.00
	Guthrie Smith's book, Rehabilitation, Reeducation and Remedial Exercises.	1	6.00
PC-2227	Gymnasium mats, plastic, foam rubber 3 inches by 5 feet by 10 feet.	1	187.50
PC-2256	Leg exerciser set	1	49 00
PC-2295	Kanavel table	1	119 50
PC-2314	Japanese finger traps	1 gross	2 50
PC-2251A	N-K 100B unit for progressive resistive exercises to the knee joint muscles (all welded table) and N-K 75B torque resistance unit.	1	179.50
PC-4197	Collwill intermittent venous occulsion apparatus	1	177.00
PC-4540	Straight skis	1	18.50
PC-5030	Hand dynamometer	1	15.00
PC-5040	Newman expansometer	1	13.50
PC-5060	Sphygmo-oscillometer—collens	1	42.00
PC-5080	Thermocouple	1	144.00
PC-5105	Sphygmo-manometer—Mercury type	1	25.75
PC-6090	Crepe paper slippers	1,000	33.75
			1,777.00

Occupational therapy department

Leatherwork tools and supplies	$466.05
Occupational therapy office furniture	1,542.02
Prevocational testing equipment	756.50
Weaving looms, etc	301.50
Childrens' toys	30.00
Woodworking	894.87
Plastics	148.79
General clinic equipment	1,824.00
Printing and graphic arts	1,410.60
Ceramics	740.00
Miscellaneous tools	87.00
Metal working	555.75
Activities of daily living	903.70
Total	9,630.78

Vocational workshop equipment

BUSINESS EDUCATION AREA

2 electric typewriters, at $450	$900. 00
2 typewriter tables, special 2 by 4 feet, at $50	100. 00
4 typewriter chairs, 913 Royal, at $21	84. 00
1 dictaphone, dictator	400. 00
1 dictaphone, transcriber	400. 00
4 stools, 668M Royal, at $40	160. 00
1 adding machine, Burroughs	313. 40
1 standard typewriter	240. 00

GRAPHIC ARTS DEPARTMENT

Platemaker	1, 200. 00
Layout and stripping table	300. 00
Silk-screen unit	20. 00
Linotype (used, if possible, including mats)	4, 000. 00
Bookbinding unit, bench, looms, miscellaneous equipment	175. 00
Rubber-stamp machine	75. 00
Embossing machine	54. 00
Type and insignia for above, approximately	250. 00
Gold-stamping machine (Kwikprint)	125. 00
Type and insignia, approximately	250. 00
4 stools, 668M Royal, at $40	160. 00

ELECTRONICS AREA

4 stools, 668M Royal, at $40	160. 00

WOODWORK AREA

Miscellaneous hand tools: planes, saws, chisels, bits, drills, etc	2, 000. 00
Radial saw, 14-inch	575. 00
Belt and disk surfacer (sander)	250. 00
Oilstone tool grinder, Mummert Dixon	436. 00
Belt sander (Boice Crane with 18 by 60-inch table)	450. 00
Spindle shaper	420. 00
Accessories and cutters	50. 00
2 benches, 2-door storage type (equipped with rapid action vises) at $120	240. 00
Router	85. 00
2 stools, 668M Royal, at $40	80. 00

METAL TRADES AREA

Sheet metal bench	$220. 00
1 work bench	135. 00
2 vises, machinists 5-inch, at $34	68. 00
1 rotary, including turning, burring, rolls, etc. Pexto 622	125. 00
1 square shear, Pexto 137	368. 00
1 bar folder, Pexto 63	210. 00
1 slip roll	135. 00
1 box and pan brake, Berkroy B90	279. 00
1 brake and folder combination, Pexto 696	385. 00
1 lever shear, Whitney No. 38	55. 00
1 circle shear, Pexto 298	255. 00
1 DeAcro Bender, No. 2 with stand and accessories package	323. 50
Hatchet stake	17. 50
Common square stake	11. 00
Round-head stake, 3-inch diameter	6. 00
Universal stake holder and stakes, No. 964	150. 00
Hollow mandrel, 40-inch	35. 00
Miscellaneous sheet metal hand tools—snips, seamers, rivet sets, punches, hammers, pliers, awls	300. 00
Drill press, bench, Walker Turner, 15-inch	204. 45
Electric welding outfit—Trans. type Lincoln AC 180T with dial system for amperage	220. 00
Accessories, battery charger, shields and torch, etc	35. 00
Acetylene welding outfit	135. 40
Presto-O-Lite outfit, 5 in 1 (Noland)	39. 75
Welding tank truck, tandem type with tires	42. 00
3 stools, 668M Royal, at $40	120. 00

Vocational workshop equipment—Continued

TEXTILES AREA

1 cushion filling machine, 26 by 36 inches	$182.00
1 button machine	47.50
1 upholsterers' knives—assorted	15.00
Trimmers' snips, 7-inch, 9-inch, and 12-inch	28.00
1 trimmers' snips, left-hand, 11-inch	13.50
Upholsterers' shears	20.40
Scalloping shears	16.00
Magnetic hammers, assorted sizes	15.00
Pinking shears	14.00
Webbing stretchers, assorted	10.00
Mallets, assorted	5.00
Webbing pliers	15.00
Hog ring pliers	5.00
Nail lifters, assorted	6.70
2 sewing awls	4.00
Gun tacker	27.50
Belt sander	80.00
Orbital sander	50.00
Claw hammers, assorted sizes	15.00
Screwdrivers, steel tapes, rules, squares, T bevel, chisels, planes, brace, auger bits, and other assorted tools	300.00
3 stools, 668M Royal, at $40	120.00
Materials, supplies, and miscellaneous tools and equipment	2,842.00
Grand total	21,605.79

Dietary department

1 electric hot truck	$975.00
2 dish lowerators	506.00
4 roast pans, heavy duty	115.00
1 ice truck	220.00
1 soiled dish truck	235.00
2 tray carts, at $264.50	529.00
4 folding stands for dining room	127.00
20 tables	600.00
1 dozen chairs	150.00
1 posture chair with arms for dietary office	56.00
1 meat slicer	479.00
1 vegetable slicer to fit Read table mixer	59.50
1 freight scale for storeroom	210.00
6 12-cup size stainless steel coffee pots	70.00
12 strapped cupcake pans, at $16.50	198.00
1 dozen stainless-steel storage jars	64.00
2 dollies for dish racks	247.50
1 ice tea dispenser	60.00
Stainless steel:	
Knives	78.80
Forks	86.00
Teaspoons	60.00
Soup spoons	51.60
Ice tea spoons	51.60
China:	
Dinner plates	167.20
Salad	118.00
Cups	206.00
Saucers	126.00
Cereals and soup	115.20
Dessert	118.00
10 plastic racks for cups	125.00
6 plastic racks for glasses	90.00
Total	6,294.00

Maintenance department

Plumbing equipment:	
½ shank, complete set, high-speed drill with holder	$26.00
1 masonry bits 3/16, 1-inch set	35.00
½ shanks, complete set high-speed drill	26.00
1 tinsnips, size 133/4	5.80
3 only closet augers	25.00
1 flushing gun	64.95
1 handy electric Snakentainer	97.20
1 dehumidifier	125.00
1 handtruck MAG	34.95
5 to 5 pound, CO_2 fire extinguishers	173.00
5 to 10 pound, CO_2 fire extinguishers	274.75
5 to 20 pound, CO_2 fire extinguishers	356.00
Machine tools: 6 Delta, lanterns, at $10	60.00
Total	3,062.15
3 Ideal voltage testers with cases, II No. 61004, at $12	36.00
3 fuse pullers, No. 34–001, at 50 cents	1.50
3 fuse pullers, No. 34–002, at $1	3.00
1 fuse puller, No. 34–003, at $3	3.00
49 units steel P. D. J. shelving, 16 inches by 36 inches, at 75 cents	1,550.00
200 feet water hose	25.00
Carpenter tools:	
1 handsaw, 26-inch length, 8 crosscut	7.65
1 handsaw, 26-inch length, 5½ rip	7.65
1 block plane, 6-inch cutter, 1⅝, at $5.20	5.20
1 Stanley plane, 8-inch size, 1¾, at $7	7.00
1 Stanley plane, size 14-inch, 1¾, at $7.70	7.70
1 Stanley Surform tool, plane type, size 10 inches by 1⅝ inches	3.25
12 replacement blades, 10 inches by 1⅝ inches, at 90 cents	10.80
8 fixture clamps, fit ¾-inch pipe, at $3 set	24.00
1 drill, high-speed wood set, ¼-inch shank, ⅜ to 1 inch	5.00
1 bit brace, Miller Falls, 8–10–12	25.00
1 carpenter level, Z–24	6.95
2 carpenter squares, framing SS, at $6	12.00
1 miter box, size 2½ metal, at $18	18.00
35 over-bed frames, at $85	2,975.00

Schedule F—Anticipated revenue

	Inpatient	Outpatient
From compensation, liability, and private patients that need rehabilitation services and can afford to pay:		
Physical thereapy, $3 to $6 per prescription 4×$3×251	$3,012	$3,012
Occupational therapy (same)	3,012	3,012
Workshop activities, $1 to $5 per prescription	3,012	3,012
Psychological testing, $5 to $10	1,000	1,000
Social-service evaluation, $5 to $10	1,000	1,000
	10,036	10,036
Total	20,072	

BUDGET REQUEST FOR 1959

Dr. WHITE. I have included the budget.

Senator HILL. Will you leave us the breakdown on the budget.

Dr. WHITE. Yes, sir. I have submitted five copies to the clerk.

Senator HILL. You are asking for the $434,602.17 for the next fiscal year?

Dr. WHITE. That is correct.

Senator HILL. How much did you get this year?

Dr. WHITE. Approximately $200,000.

Senator HILL. About $200,000 this year?

Dr. WHITE. Yes, sir. We are going into our expanded facility which will increase our capacity about four times.

Senator HILL. How much did you get the previous year, do you recall?

Dr. WHITE. I was not connected with it the previous year but it was something less than that, because they had not developed the program. I have not been with them quite 2 years.

Senator THYE. Mr. Chairman.

Senator HILL. Yes, sir.

Senator THYE. What did the Budget Bureau allow in their recommendation?

Dr. WHITE. As I understand it in talking to the members of the OVR staff, which included not only Mrs. Switzer but Mr. Martz, who has the Research Grants Section, Mr. Redkey, who has charge of this particular grant, and Dr. Herman in that Office. They allowed us the same amount that was passed last year, but I am not positive about that. I just heard that indirectly.

Senator HILL. In other words, if they got the amount of money that the budget allowed them, they estimate that this amount of money allowed about $200,000 for your clinic?

Dr. WHITE. That is what I understand. It is the carryover of the same amount as last year, as I understand it.

Senator HILL. Any other questions?

Senator THYE. I have none.

Senator HILL. Dr. White, I certainly want to thank you for your appearance this morning.

Senator HILL. Dr. Paul Magnuson and Gen. F. S. Strong, we would be happy to have you gentlemen come around.

PROSTHETICS RESEARCH BOARD, NATIONAL ACADEMY OF SCIENCES

STATEMENTS OF GEN. F. S. STRONG, JR., CHAIRMAN, AND DR. PAUL B. MAGNUSON

FUNDS FOR RESEARCH AND DEMONSTRATION PROJECTS OF OFFICE OF VOCATIONAL REHABILITATION

Doctor, we will be glad to have you proceed, sir.

Dr. MAGNUSON. Senator, I think General Strong ought to proceed me. He is going to talk about figures. I am not going to talk about anything but patients.

General STRONG. That is what he is for. Sometimes we forget the patient, I think, which we do not want to do.

I have a few remarks which could be put in the record.

Senator HILL. We will put them in full in the record, and then you go ahead with any point you wish.

General STRONG. Part of this is historical, and I just want to get it in the record and get down to the point of where Miss Switzer became interested in the work that we have been doing.

TRAINING CLINIC TEAMS

You will recall that about 2 years ago, just as soon as the Prosthetics Research Board was formed, I came up here and rather out of order asked for $200,000 to train some clinic teams. This was done,

and according to the figures I have here, the result of that $200,000 is that some 140 such teams were trained at such schools that had previously been established under the artificial limb program using VA funds.

Training funds for this purpose are now being budgeted regularly for OVR, and this year, of course, its rehabilitation counselors have been added.

So I think that money that was put in then was done just at the right time because the VA could not very well carry this forward.

COORDINATED EFFORTS ON PROSTHETICS PROGRAM

Then last October Miss Switzer wrote our Board asking for further assistance in two ways: First, recommendations by the Board as to the long-range program in prosthetics and orthopedics with suggested amounts which might be provided by the Department of Health, Education, and Welfare, the Veterans' Administration and the armed services, to assure continuity and coordination of efforts in these important areas of rehabilitation.

In other words, she felt that the time had come when we might look at the picture as a whole since it had got away from the VA and had got into a broad nationwide program. So she asked for that.

Secondly, advice by the Board and its technical groups as to the relative value and priority of applications for research grants under the provisions of Public Law 565.

Some of them are good and some of them are not so good.

5-YEAR PLAN FOR PROGRAM

At its meeting on October 28, the Board formally agreed to assist in any practicable way and since has been working on a suggested 5-year plan, the first draft of which was approved in principle by the Board at a meeting on April 28.

In preparing this plan, the Board threw an ad hoc planning committee under my chairmanship with OVR and VA representation, together with Dr. Paul B. Magnuson representing the medical profession, and Mr. Chester C. Haddan of the prosthetic and orthopedic profession, has developed preliminary figures recommended by the various participants in the program which we believe to be conservative.

Dr. Magnuson has been all through this. You will agree.

Dr. MAGNUSON. Sometimes I do.

BUDGET BUREAU RESTRICTS GRANTS' FUND

General STRONG. We find, however, that presumably by order of the Bureau of the Budget, the rate of expenditure by OVR for research grants for fiscal 1959 has been held to the current figure of $3,600,000 of which only $500,000 would be available for new grants for all categories.

Since the minimum of $250,000 of new OVR research grant money is indicated for prosthetics and orthopedics alone under the Board's integrated program for fiscal year 1959, it is evident that additional funds will be required if these and other important new projects are to go forward.

Then I have attached a breakdown of this prepared by my assistant in consultation with OVR and others. You might say that this is my personal addition. I am not tied in with the Bureau of the Budget or anybody, so I have been able to do this. I believe that this is modest. I honestly do.

There are two other points that I would like to bring up.

Senator HILL. Go ahead.

PROPOSED RISE IN CEILING

General STRONG. I do not know whether you can help or not, but they are problems. One of them has to do with the Children's Bureau. I understand that Senator Kerr is introducing a bill. Do you know anything about a bill to raise the ceiling?

Senator HILL. Yes; to increase the authorization.

General STRONG. The authorization. Do you know what the status of that is? Do you know whether there is any chance that might get through this session?

Senator HILL. Senator Kerr is a member of the Senate Finance Committee, and that is the committee that handles that particular legislation. I have not talked to him lately about what the projects are.

General STRONG. But you do know something about it?

Senator HILL. Yes, I do.

General STRONG. I refer to it in here because in an integrated program, of course, it is necessary to consider children. It is a very important thing. The ceiling has been reached and neither OVR nor the VA may, under the law, devote their funds for the help of these kiddies. If there were any way to raise this ceiling, then the Children's Bureau would make these funds available.

QUESTION OF NEED FOR LEGISLATION

Senator THYE. I beg your pardon, Mr. Chairman. Could it be accomplished without the legislation authorization?

General STRONG. I do not know.

Senator HILL. I think what the general is speaking of now will take legislation. We can check that pretty carefully and see. Mr. Downey suggested it could.

Senator THYE. It would be the same as legislation.

Senator HILL. Which would mean that we should have legislation for it.

General STRONG. Of course, if you do not have it, you get along, but the work for the children is starting, the work in the Michigan Crippled Children's Commission and the work at UCLA.

I talked to Dr. Lesser over there about it, and he just says that they need to break that ceiling in order to do this job. I simply bring this out as a problem.

LIMITATION OF INDIVIDUAL ALLOCATIONS

The second problem has to do with an administrative matter. I think that our most important project, if there is such a thing, is at the San Francisco Medical Center, under Dr. Verne Inman. He was given a grant some years ago for $150,000 a year for a period of

5 years, but this was just a starter. They have established in the General Council an arbitrary ceiling of $150,000 for any particular project. I have seen some correspondence about it. I do not understand why it is or what can be done about it, but I have heard that these things can be broken.

Dr. MAGNUSON. General, if I could interrupt you, I think it is to any one individual or any group of individuals for that year.

General STRONG. It is arbitrary.

Dr. MAGNUSON. Yes; it is arbitrary. If Verne had divided himself into 5 names, he could get $150,000 for each name; but, because he is heading the whole business, they have limited him to $150,000.

General STRONG. I asked questions around, and I have been told that. I have not looked it up, that in certain instances, for special purposes such as the problem for amputees and cripples, and I think for other problems they have done it. However, they have not done it for us. I think there has been written into the appropriation act under certain circumstances that so much should be available for this purpose.

We used to do this down at the VA when there was trouble. I am not asking that it be done. I just present a problem here because, at the present time, he can only see $150,000 for fiscal 1959 and he needs $280,000 in an integrated program.

I will say this and you will all agree to this: This is the basic research. It is here that basic research in this field must go on if real progress years from now is to be expected. What you do next year gives results years hence.

I had lunch with Dr. Inman yesterday. He is in town for the AOA, you know, and he is quite concerned about this particular problem. It is mentioned in my statement.

I think those are the points that I wanted to bring out.

Senator HILL. Thank you very much, General Strong. Your full statement will appear in the record.

(The statement referred to follows:)

STATEMENT OF FREDERICK S. STRONG, JR., CHAIRMAN, PROSTHETICS RESEARCH BOARD, NATIONAL ACADEMY OF SCIENCES—NATIONAL RESEARCH COUNCIL, WASHINGTON, D. C.

Since the close of World War II, the Congress has appropriated funds for a program of research and development in prosthetics originally intended to provide better artificial limbs for veteran beneficiaries who had suffered amputations resulting from active service in the Armed Forces. To assure continuation in this undertaking, the Congress enacted Public Law 729, 80th Congress, under which the Veterans' Administration was authorized to request up to $1 million a year for this purpose and the Administrator of Veterans' Affairs was authorized to make the results of this research available for the benefit of all amputees, civilian and veteran alike.

For some 10 years this activity, which came to be known as the artificial limb program, was carried forward as an integrated effort of the armed services and the Veterans' Administration, with the assistance of several contractors supported by VA funds under the above Public Law 729, including the National Academy of Sciences which, through its Advisory Committee on Artificial Limbs, was asked to act as general coordinator. I was appointed Executive Director of the latter with responsibility to see that the program functioned as contemplated by the Congress and the sponsoring Government agencies.

Since veteran beneficiaries are fitted by commercial limb shops all over the country, in order to assure them better artificial limbs wherever they might be it was necessary to organize a system of research, development, testing, manufac-

ture, clinical application, training of clinic team personnel, and dissemination of information. This resulted in improved service for all amputees and attracted the interest, among others, of the Office of Vocational Rehabilitation and the Children's Bureau, Department of Health, Education, and Welfare.

To provide for this broadening interest, which later included requests for assistance in the allied field of anatomical bracing, the Advisory Committee on Artificial Limbs was superseded in December 1955 by the Prosthetics Research Board, under my chairmanship. It was shortly thereafter that I was asked to explain to this committee how additional funds in the suggested amount of $200,000 could be used effectively by OVR in fiscal year 1957 to carry on training courses in prosthetics for clinic teams consisting of physicians, therapists, and prosthetists. As a result some 140 such teams were trained at schools which had previously been established under the artificial limb program using VA funds. Training funds for this purpose are now being budgeted regularly by OVR and this year courses for rehabilitation counselors have been added.

Last October the Director of OVR, Miss Mary Switzer, wrote our Board asking further assistance in two ways; first, recommendations by the Board as to a long-range program in prosthetics and orthotics with suggested amounts that might be provided by the Department of Health, Education, and Welfare, the Veterans' Administration, and the armed services, to assure continuity and coordination of effort in these important areas of rehabilitation; and, second, advice by the Board and its technical groups as to the value and priority of applications for research grants under the provisions of Public Law 565, 83d Congress. At its meeting on October 28 the Board formally agreed to assist in any practicable way and since has been working on a suggested 5-year plan the first draft of which was approved in principle by the Board at a meeting on April 28.

In preparing this plan, the Board through an Ad Hoc Planning Committee under my chairmanship, with OVR and VA representation, together with Dr. Paul B. Magnuson representing the medical profession, and Mr. Chester C. Haddan the prosthetic and orthotic profession, has developed preliminary figures recommended by the various participants in the program which we believe to be conservative. We find, however, that, presumably by order of the Bureau of the Budget, the rate of expenditure by OVR for research grants for fiscal year 1959 has been held to the current fiugre of $3,600,000, of which only $500,000 would be available for new grants for all categories. Since a minimum of $250,000 of new OVR research grant money is indicated for prosthetics and orthotics alone under the Board's integrated program for fiscal year 1959, it is evident that additional funds will be required if these and other important new projects are to go forward. Attachment A herewith suggests that funds to be appropriated under section 4, Public Law 565, 83d Congress, be increased from $3,600,000 to $4,600,000 for all purposes.

While I am here to testify principally on behalf of the vital role of OVR in the overall program I should like to take this opportunity to point out two other problems where your committee can be of assistance. One has to do with the work of the Children's Bureau, since neither OVR nor VA may provide funds to help our crippled children, and the Bureau's ceiling of $15 million for work in this area has been reached so that, for fiscal year 1959, we are not going to be able to carry forward this program as required. At our demonstration before Senator Hill and the Senate Committee on Labor and Public Welfare just a year ago, child amputees where shown for the first time and they will be here again on May 14 for a demonstration in room 5051, HEW.

The other involves the Public Health Service through the National Institutes of Health. We know this committee has indicated time and again its desire to provide the money necessary to carry forward all worthwhile research in the various fields of which NIH is supposed to take cognizance. However, in our project at the University of California Medical Center at San Francisco, Dr. Verne T. Inman and his group, studying the medical problems of amputees and cripples, are struggling under a ceiling of $150,000 a year set by some administrative criteria which I cannot understand when, for fiscal year 1959, they will need $280,000. And it is here that basic research in this field must go on if real progress years from now is to be expected.

In recent visits by our Ad Hoc Planning Committee to the various projects throughout the country we have noted the enthusiasm of the dedicated men and women who have achieved such advances as we have seen thus far and who merely ask help to go forward. I welcome this opportunity to speak on their behalf.

ATTACHMENT A

The budget request for fiscal year 1959 by the Office of Vocational Rehabilitation, HEW, covering research and demonstration projects, as provided by section 4, Public Law 565, 83d Congress, was restricted by the Bureau of the Budget to $3.6 million which is the same amount appropriated for this purpose in fiscal year 1958.

Of this $3.6 million, $3.1 million will be required to continue projects initiated prior to July 1, 1958, leaving only $500,000 for the initiation of new projects.

To those who are familiar with the OVR program it is self-evident that a better balanced and more efficient program can be effected if $4.6 million is made available for the following purposes:

Continuation of projects underway	$3, 100, 000
Initiation of new selected demonstration projects for the severely disabled	400, 000
Initiation of new research projects in prosthetics and orthotics	370, 000
Initiation of new research projects in areas other than prosthetics and orthotics	730, 000
Total	4, 600, 000

The OVR research and demonstration program, since its inception in 1954, has attracted many top-grade professional personnel and organizations that otherwise would not have been able to contribute their creative efforts to the field of rehabilitation. In view of the results obtained to date, it is felt that a rate of expenditure of $3.6 million annually is too low a point at which to level off this program which has such great potentialities, and that the additional $1 million represents the normal growth that this program, which covers such a broad field, warrants.

NEED FOR LONGER-TERM APPROPRIATIONS

Senator HILL. Dr. Magnuson.

General STRONG. He can bring tears to your eyes.

Dr. MAGNUSON. Senator, I do not know where to start on this. I think I wrote you a letter some time ago which was much too long, verbose, but that is my fault.

Senator HILL. I did not think so. I thought it was full of a lot of good meat, so to speak, awfully good. As a matter of fact, I am going to have the letter inserted in the record at this point.

(The letter referred to follows:)

WASHINGTON, D. C., *April 4, 1958.*

Senator LISTER HILL,
Senate Office Building, Washington, D. C.

MY DEAR SENATOR HILL: You may be interested to know that I just returned from a round-robin trip concerning work of the Prosthetics Research Board of the National Academy of Sciences-National Research Council. This was in the way of a survey to see what had been accomplished, what was being accomplished, and what was planned to be accomplished in two fields.

One, the one that you have been familiar with for several years, prosthetics research and development. The progress that has been made on these things has been great. However, as I see it, it can be much greater in the not too distant future, if we can develop the resources that we have at hand. And to go hand in hand with this, there should be something done on braces. These two things have always been alley-shop developments. And alley shops have no money to do research with, and if they did have the money, they don't have the brains, the training or the abilities to find people who can help them in their research.

This has been done by General Strong in conjunction with the Research Council and the Veterans' Administration up to now. Now we have coming into the picture rehabilitation, which is handled by the Office of Vocational Rehabilitation, the children's program, which is handled by the Children's Bureau, the Public Health Service, which has plenty of money to devote to research through the National Institutes of Health, if you could get them to do it. However,

this is what has happened so far as Public Health is concerned. They did appropriate and assign $150,000 a year for 5 years to research work, which we had started in conjunction with the University of California in San Francisco. Now the man who is the head of this research work there is one of the greatest fellows that I know. He has had a complete training as orthopedic surgeon, as certified by his board. He is a trained physiologist, and he likes physiology and research work much better than he does taking care of patients. So he has gone into this work wholeheartedly and has gotten the professor of engineering to go in with him. And what these two fellows have done you are familiar with, at least in part.

Now it comes to a time where they have about five problems started, and some of them almost complete, and there is no money to go ahead and finish them. And we have had practically an ultimatum from our friend, Verne Inman, who is the doctor in charge of this research work, saying that next year he is going to need about $340,000, instead of $150,000, in order to get some of this stuff finished up which is hanging in midair now, and he doesn't have money enough to continue. Not only that, he can't get the men to do this research work, to tie themselves up, unless he knows enough money is coming.

So there must be some money coming in on a 5-year basis, in sufficient quantities to allow these researchers to go ahead and develop the things that they have started. So the people in the general NIH Council of the Public Health group just say that they don't assign more than $150,000 to any one project, or any one university. Well, that may be all right if you had 3 men working on different projects, and you could get $150,000 apiece for them, but in this case we have one man who has charge of the whole problem, and we couldn't find another man as fitted as he is to carry it on, if we looked the whole world over. I am sure of that, because we pretty nearly did that before we started.

Now in addition to these 3 departments, the Veterans' Administration, HEW, in its 3 departments, the Army and the Navy are associated in this same effort. And they are all working with the Prosthetics Research Board through the National Academy of Sciences-National Research Council. It has been the most concerted, cooperative effort that I have ever seen. The Office of Vocational Rehabilitation under this program has established schools in conjunction with our artificial limb work, and this is to teach teachers to train amputees in the use of their artificial limbs. They are also going ahead with the teaching program on physical therapy, occupational therapy, and also we have established schools for them which are teaching placement and job advising work to the men and women who are going into this field. Without them we couldn't make a complete program. They have had their budget cut down about $4 million this year, mostly because of the Bureau of the Budget, not because Mr. Fogarty's committee obstructed the appropriation, just the contrary, and they did give Miss Switzer, I think, a chance to say she needed more money. But she was under orders from the White House that they were not to ask for any more money than the Budget Bureau had allowed them. And that was period, so that she hardly dared to express her free opinion of what this $4 million cut was going to do to her or to the rest of the program.

As you know, through a law that was passed several years ago, the Prosthetics Research Board gets up to a million dollars every year, which is regularly appropriated and about which there is no trouble. But with these other departments working with the Prosthetics Research Board, there is no adequate authority for them to pay their share of the overhead of the Prosthetics Research Board or the expenses in the Academy-Research Council. So administrative and other expenses such as procurement of new devices for test is thrown on the Prosthetics Research Board for the Veterans' Administration to pay. Dr. Middleton is concerned about someday, somebody coming along and saying your overhead is clear out of reason, and having an investigation. Of course, my own feeling in the matter was that we ought to have an investigation so that Congress will know how this money is being spent, and why it ought to be spent in this way, and why the Veterans' Administration Research Department had has to carry all the overhead. Well that's the way it is, and I think that we are all looking for a way out, so that each one of these departments can do their share and can work with the Prosthetics Research Board on both braces and artificial limbs.

This association between the Army, Navy, Public Health, Rehabilitation, Children's Bureau, and Veterans' Administration, is the first time, as far as I know, where this many departments of the Government, all supported by Government money, have been working together harmoniously through the Research Council and a board which has no authority at all except to bring the efforts of

these departments together in the simplest possible way, and produce results that can be produced with this kind of cooperation.

Now, as I have said, the Veterans' Administration has had all the overhead piled on them up to now, because of some quirk in the laws under which these other departments work. However, the Office of Vocational Rehabilitation in HEW and the Children's Bureau are willing to go along, if they have money to do it with and if they can be given something to work under, as a result of an order by Congress, which will allow them to carry their fair share of the overhead. The Public Health have put a little money in for these purposes and if they had a word from Congress, that they were to use part of their money as the Veterans' Administration is, to promote this work, I think it would be a great step and an advance in cooperative research between Government departments.

It appears to me, knowing nothing about it, that if the money were given to the Rehabilitation Department and the Children's Bureau, and it was specified that it was appropriated by Congress for this purpose, and state the purposes, that we could go ahead with the research work, especially if, in this same directive the Public Health was instructed to support this effort out of moneys already appropriated, of which they have plenty, and would need no additional appropriation, up to a certain amount. Right now, however, I understand a million dollars is needed in OVR for the next fiscal year for this effort to keep this work going until some of these other problems can be worked out. And then if the effort were spelled out so that it could be continuing over a 5-year period, I think that the children and crippled adults of this country would reap a reward at the end of 5 years, with the investment of very little more money than is going into it now, that would be so great, that we would wonder why we weren't farsighted enough to see it long before.

The thing that OVR and Children's Bureau is most anxious to get at immediately is the research work on children's and adult's braces. There has been no improvement in these, so far as I know, since the days of the old fellows who used to make armor to fit all over the outside of the gentlemen who rode horses and fought with spears. We have been putting braces on these poor little half-paralyzed arms and legs, that didn't have enough muscles in them to move their bones and parts, and then we put heavy stuff on them that they can hardly lift with all the rest of their muscles so it makes them almost completely disabled.

We must develop light materials in the first place and we must motiorize many of these parts so that these children can use their arms and legs much better than they have ever been able to in the past. This involve tremendous problems in materials, physics, chemistry, and mechanics, to say nothing about orthopedic surgery and psychology. This is the thing that OVR and Children's Bureau must have money to support this year because the VA money cannot be used for the development of artificial limbs for children, nor can they engage their money in braces for children. This is a personal letter to you so I am saying what I like. I am not lobbying. As a matter of fact the VA money has been used, to a certain extent, to develop artificial arms and legs and various forms of prosthesis and braces for children. However, I don't think that we can get away with it for very long. If OVR and Children's Bureau got a million dollars now, I think that by the time the appropriation comes up next time we will have a little something to report so that we can get more if necessary.

Senator Hill, you are the man who understands these things, and when the thing comes up to your committee, General Strong and I would be very glad to be called and tell you what has been accomplished, and what we believe we can accomplish with a little more money appropriated in a certain way and with certain directives by Congress. I don't think that you would have to have anything except that order to go along with this program which already has benefited tremendous numbers of people and will benefit tremendous numbers more, if it can be continued. If it cannot be continued in this way a great part of the development that we have gone through and the money that we have spent will be wasted, because there is not enough to carry it on the way it should be.

When I think back 10 or 12 years since I first saw the 3 double-arm amputees at Percy Jones Hospital, and said to my colleagues, if we don't do anything else, and spend $10 million for the next 5 years fixing these fellows so that they can take care of themselves, feed themselves, dress themselves, and be useful citizens, I would consider the time and money well spent. Two years after that I entertained these fellows at my house in Washington, and took them to the Army and Navy Club on a Sunday night when they have buffet. Every one of them fed himself. I saw one of them take off his artificial arms on the President's

desk, get out from them and stand there before the President completely disabled. And I saw him get into his artificial arms and dress himself and the President had wet cheeks and incidentally so did I.

Sincerely yours,

PAUL B. MAGNUSON.

PROBLEM OF AMPUTEES

Dr. MAGNUSON. I would just like to have in this record some statements about how this happened and how it has been going and how it isn't going any more unless we have something in writing or some sort of a directive as the will of Congress that certain things do go on.

As you know, this rehabilitation business in the Government practically started with the Veterans' Administration.

Senator HILL. That is right. You started it.

Dr. MAGNUSON. Well, I have been doing it for many years before that. As a matter of fact, I started in my own office in 1914. It has grown up from there.

This amputee business and brace business is part of the rehabilitation program.

At first, at the request of the Surgeon General of the Army this committee was appointed from the National Academy of Sciences and National Research Council. We found out, upon very little investigation, that during the world war, Second World War, as the final figure turned out, we had about 18,500 amputees in all of the military services.

During that same period in industry serving the military services we had over 67,000. So we, naturally being civilians and interested in people and not just one branch of a service, said that this must be spread out, and whatever we learn to the benefit of the veterans must become available for the benefit of all the people.

That is the way General Strong came into this picture. If it had not been for him, this never would have been put out and gotten together as it is now. He is working very hard, and he has. He sometimes did not know which way he was going, but he usually found the right way.

Senator HILL. And he kept going.

Dr. MAGNUSON. Yes. Now, through his own efforts, he has interested many great brains in this country in a subject or in a group of subjects which really do not interest very many great brains. Somebody did it, and I think General Strong did it.

Be that as it may, even the devil deserves his due, you know. So we are now as a committee. I was on the committee. I am not on the committee any more. Maybe it was like the VA. I got fired. I have been fired by so many people.

General STRONG. I am not going to tell the Senator why you are not on the board right now. I am not going to tell him.

Dr. MAGNUSON. Anyway, General Strong has amalgamated the efforts, unified the efforts of three of our great bureaucracies: the Army, the Navy, and the Veterans' Administration.

Now we come into a field where we are dealing with amputees so far as the VA is concerned. The VA on this particular program does not have anything to do with rehabilitation within the VA. This is an appropriation for research, as you well know.

Now, the question has arisen that since it has spread out, the Veterans' Administration cannot interest themselves in anybody but veterans and veteran adults. That is what they are authorized to do.

Senator HILL. Their jurisdiction is limited there.

Dr. MAGNUSON. Their jurisdiction is limited.

NEED IN CHILDREN'S BUREAU

The Children's Bureau, as General Strong pointed out, has no money to work on this and has no authorization to do it. Then there is the problem of braces for children. The motivation or the motorizing, let us say, of braces and artificial limbs is an urgent problem.

RUSSIAN WORK IN PROSTHETICS

I am going to Brussels this summer on my little annual jaunt to see this new Russian arm which they say is activated by brain waves. I will admit, maybe they have stronger brain waves or stronger something in Russia. Maybe it is just an odor. But nevertheless, they say they can activate it by brain waves. I am going to go over there and look. I am arranging with the State Department to get that arm in my hands and find out how it works. If it works.

They are making arrangements through Russian contacts which I expect will be very interesting.

Senator HILL. That sounds most interesting. General Strong and I will await with great interest your report.

Dr. MAGNUSON. You shall have it.

Incidentally, Senator, I am paying my own expenses. If that ever comes up, why you just tell them that it did not cost them anything.

Senator HILL. It is very fine of you to go, very fine.

WORK OF REHABILITATION

Dr. MAGNUSON. Now, then, there is the rehabilitation. All this involves the training of people. We have enough people to fill the places now. We have got to train people to train people.

On these amputees, for instance, take our Chicago institute. This is their voluntary statement. The rehabilitation people of the State say that our institute in examining for artificial limbs has saved the State more money than it has cost them because the State law says that anybody who is a citizen of the State of Illinois who has an amputation can get an artificial limb if the doctor so orders it.

You know that most practitioners haven't any training and are not particularly interested, so they send them all to the institute, and the institute passes on whether they need an artificial limb or whether they can wear it. Many of these circulatory cases where they have gotten artificial limbs in the past—they could not wear them. They cost $350, $400, or $500, or whatever. They couldn't wear them. They will not get them now because the doctor will not order them except if the patient can make use of them.

When you add it all up, the spending of the money saved more money than it cost.

How do we do it? The amputee is examined and he is examined by an expert, Dr. Clinton Compere who is one of the Army's best and

is one of the VA's best. We just stole him from Northwestern University.

We do not give those people their artificial limbs. When they are ready for fitting, they come back and they are fitted before Dr. Compere, and he does it through the artificial limb people. When they are finished and approved, they are sent to the institute, and then the individual who is going to use them comes back. He is never given his artificial limb until he has learned how to use it and produce.

It is perfectly astonishing, if you never let them get in bad habits, how quickly they learn. We have hardly a patient with an amputation that is not back making as much money and sometimes more.

Senator HILL. In other words, they are restored to a productive life.

FUNDS NEEDED TO TRAIN WORKERS IN REHABILITATION

Dr. MAGNUSON. That is right.

Miss Switzer needs money for training individuals to train people in rehabilitation, and that covers a broad field.

We have only two schools now, one in Los Angeles and one in New York, and we are establishing one in Chicago in the institute that I founded.

We need to have some authority for the contribution that is being made by these various bureaus or these various sections of the Government so that they can continue to work under this very loose arrangement so that the heads of those institutions will not be called on the carpet by the budget or somebody else and say, "You are wasting money, and you have no authority to do this."

I think along with the money, as General Strong has indicated, this year we should have something that shows that the will of Congress is to go along with this pattern that has been set up and has worked so efficiently and that the heads of these departments are not going to be blamed for working with the Academy of Sciences, the National Research Council; and that the overhead which the Academy of Sciences has to depend on for the overall expenses of this committee could be used.

They would have to be spent from Government funds anyhow. Somebody would have to spend it because there is travel and that sort of thing.

FUNDS FOR WORKS BY RESEARCH COUNCIL

They should allow the Research Council enough funds so that they can buy models of these things, and whenever they are brought up to what we want, then 50 or 100 can be ordered, whatever seems to be necessary, and be paid for. That, up to now, goes in overhead.

Middleton is scared to death. They say, "You are spending so much for overhead. We just cannot justify this."

General STRONG. Middleton wants to work this thing out. I got a very fine letter from him just yesterday. He wants to know if it is all right.

Senator HILL. Surely.

General STRONG. That is, he has his obligation, and he is willing to throw this into the pot for the benefit of all, but he wants to know that it is all right.

Senator HILL. That he has the authority?

General Strong. Yes, and that HEW has authority.

I have not looked into this, but I am told that OVR under the research grant on that provision, section IV, or whatever it is, may not give any money to the National Academy of Sciences to do this, which Dr. Magnuson spoke of, which is perfectly ridiculous.

What happens is that the VA has to buy all these models, and Dr. Middleton wonders if this is right and if the VA should be used exclusively for this when it is for the benefit of all.

Senator Hill. It is for the benefit of the civilians as well as the Government.

General Strong. I have suggested that the HEW people sit down and work their problems out. This is the time to do it. Maybe in another session of Congress there could be certain amendments to the act that would enable this kind of thing to go on. I think in the meantime that probably Dr. Middleton will make these funds available for fiscal 1959, but we cannot get money out of Miss Switzer's office to carry all the burden of all the expenses of our board.

NEED FOR EXPRESSION FROM CONGRESS

Dr. Magnuson. Excuse me. I do not know anything about the legal business, the appropriations business. I know that when I was in the VA, they always used to know when I wanted to do something that they had to go back and read whatever Congress said about it. If it was indicated that that had been the will of Congress, then the Administrator or the Attorney General would say "Yes; this seems to be the will of Congress."

General Strong. You remember when Mrs. Rogers put through that $1 million act. It was very short, but it showed what the will of Congress was that this be done.

Dr. Magnuson. What I want to see prevented is the dropping apart of this wonderful group working under what we did in the VA in that which is civilian. In other words, our doctors were all civilians. They came from civilian life. Our other people came from the same category.

This is going to drop apart if we do not have some significant statement from Congress that it is their will that this arrangement go on and that nobody is going to be accused of being a crook by doing it.

Senator Hill. Gentlemen, I assure that I am in full sympathy with what you are talking about this morning and what you seek to carry on. I shall make it my business to talk to Miss Mary Switzer and others to see just what is necessary to be done.

General Strong. They know. I don't know.

Senator Hill. With the thought in mind that whatever is necessary to be done must be done, and we should do it.

General Strong. That is wonderful.

Senator Hill. I shall be glad to do that.

General Strong. That is wonderful.

We are not the ones who are doing this. It is the 40 or 50 wonderful dedicated people around the country that are working on this thing like Verne Inman.

Dr. Magnuson. This fellow is irreplaceable. In all my experience with this work this fellow is the only man that is prepared to carry on

the basic research, because, in the first place, he is trained by Dr. Abbot, who is an orthopedic surgeon. Dr. Abbot in my opinion is the tops of anybody living in this country today in orthopedic surgery. Then he went into physiology because he loved it.

So here we have a man who has two professions. They are both M. D.'s, but they are so far in their point of view where you have one man with the training to meet all the requirements.

General STRONG. He is research minded. Most doctors have to deal with patients. It is the rare one who has this feeling of basic research.

I think some wondrous things are going to come out of Verne's studies, don't you?

Dr, MAGNUSON. I do, too.

Senator HILL. Certainly we must support this work so that what is necessary to be done may have full support.

Dr. MAGNUSON. If it is not supported this year and kept intact, I feel that the thing right now is at the parting of the ways, where we either go or it disintegrates and it goes into a lot of bureaucratic fool things where we forget all about the patients. I say that advisedly.

Senator HILL. You say that from experience.

Dr. MAGNUSON. I say that from experience. It is awfully hard to stay being a good doctor and stay and be a good bureaucrat at the same time.

Senator HILL. I want to thank both of you gentlemen for your appearance this morning. You have certainly made a contribution.

Dr. MAGNUSON. It is always good to see you. It is always an inspiration.

Senator HILL. Very fine to have you here.

General STRONG. Miss Switzer is doing a wonderful job on this.

Senator HILL. She's a dedicated person.

Senator HILL. Mr. Puth, will you come around here, sir. We are glad to have you with us.

NATIONAL REHABILITATION ASSOCIATION, WASHINGTON, D. C.

STATEMENT OF A. D. PUTH, ASSISTANT DIRECTOR

FUNDS FOR OFFICE OF VOCATIONAL REHABILITATION

Mr. PUTH. It is good to be back again. I say that advisedly because I have been here for several years.

Senator HILL. We welcome you back. You can proceed in your own way.

Mr. PUTH. I will try to make it as short as I can. Mr. Downey in writing to me said you have a number of witnesses and he was limiting me to 5 minutes. I will see if I can get it through in 2 or 3.

Senator HILL. You go right ahead, sir.

APPROPRIATION FOR RESEARCH AND DEMONSTRATION

Mr. PUTH. There are two specific items in the appropriation this year that we are interested in. One has already been mentioned by the previous witnesses, and that is the appropriations for "Research and demonstration grants." I would like to add to what they have said by saying that the National Rehabilitation Association strongly urges you to appropriate $5 million as opposed to the $3,600,000.

Senator HILL. You strongly support the increase of $1,400,000?

Mr. PUTH. Yes, sir. As you know this program began in 1955. We had 18 projects that year, 29 additional projects the next year, 48 in 1957, and during the fiscal 1958, 70 new projects were in effect.

I happen to know in talking to people who administer this program as well as some members of the Advisory Committee that this by no means is the number of projects which in effect we would actually like to support, but working under a specific appropriation they must pick and choose with exceeding care what projects they select. They all told me there are literally dozens more that they would like to support if money were available.

So I again would just like to say that we would like to urge you and the committee to give serious consideration to the $5-million appropriation for research and demonstration. We are convinced that it can be used well and it will not only help broaden the program of vocational rehabilitation in the terms of who can possibly benefit from rehabilitation but we feel it will significantly add to the number of people who can be rehabilitated once we get some of these new techniques learned and disseminated out in the field through demonstration projects.

ALLOTMENT BASE FOR SECTION II, VOCATIONAL REHABILITATION

The second point I would like to bring up is in connection with the allotment base for section II of Vocational Rehabilitation. The current allotment base is $53 million. The budget has recommended an identical amount for 1959, although OVR has recommended a larger. If the $53-million allotment base is not raised, this will mean that State allotments can be no higher in 1959 than in 1958 and that only those States that have not been using their entire Federal allotments could profit from the higher appropriations that are being made. With this statement we are attaching a sheet which shows the effect of this lower allotment base on the State programs.

In testifying before the Labor-HEW Subcommittee in the House Appropriations Committee we called attention to this situation and requested that the allotment base be raised to $56 million. Needless to say we are happy to report that Congressman Fogarty and the full committee have done it for us.

Senator HILL. It is that way in the bill now?

AMOUNT REQUESTED

Mr. PUTH. Yes, sir. We are asking that you include in the bill the figure as it was passed in the House, the $56 million.

We believe that this will encourage the continued orderly expansion of the rehabilitation programs in the States.

Incidentally, an additional appropriation of only about $900,000 will be needed to meet the needs of the States, if the allotment base is raised to $56 million.

These are the only items that we are concerned with in the appropriation.

As I am sure you know we are deeply appreciative of the support that you and the whole committee have given us in the past.

We are very happy to know that progress is made on rehabilitation throughout the country. I feel confident and I do believe I would

lead you astray if I did not tell you that there are many people in the House who I am convinced would go along in raising our research and demonstration projects.

REHABILITATION CENTER, MOBILE, ALA.

Senator HILL. You speak about progress. I might say that a week ago Sunday I had the pleasure of a very inspiring visit. I visited the new rehabilitation center at Mobile, Ala. I want to tell you, sir, that they have something there which anyone could be proud of.

Mr. PUTH. I think that is just a perfect example of what can be done when Congress and the Federal Government join in a problem which all of us recognize and which all of us support.

PREPARED STATEMENT

I would like to file my complete statement for the record.

Senator HILL. It will be included in full.

They have done a most outstanding, a most inspiring job.

As you say, that is just an example of what can be done and what must be done. We certainly appreciate your appearance here, sir. Thank you very much.

(The statement referred to follows:)

STATEMENT OF A. D. PUTH, NATIONAL REHABILITATION ASSOCIATION

My name is A. D. Puth. I am assistant director of the National Rehabilitation Association, an organization of over 18,000 individuals almost equally divided between professional rehabilitation personnel and nonprofessional persons who are concerned with the rehabilitation of the handicapped. We appreciate very much having the opportunity to testify in behalf of appropriations for rehabilitation.

There are two specific items in the appropriation to which we wish to refer. The first of these is the appropriation for "Research and demonstration" under the Office of Vocational Rehabilitation, which is included in the amount listed for "Grants to States and other agencies." This program began with the passage of Public Law 565 in 1954. Before that time, there had been no funds available for research or demonstration as a part of the rehabilitation programs. Research and demonstration projects have developed in an orderly manner. In 1955, 18 projects were begun. In 1956, 29 additional projects got underway. In 1957 the number grew to 48. During the 1958 fiscal year, 70 new projects have been put into effect.

The budget recommends $3,600,000 for Research and Demonstration for 1959. This is exactly the same amount that has been available during 1958. Since approximately $3,200,000 is needed to maintain the 1959 existing projects, this means that the acceptance of new projects will have to be brought to a complete standstill. In fact, at the average cost of such projects, not over 12 or 15 could be started in 1959. This is very distressing in view of the fact that this program has aroused a great deal of interest and numerous projects are now under consideration by the Advisory Council to the Office of Vocational Rehabilitation. In fact, it is estimated that more than 200 projects will be submitted during 1959. It is through this fund that the Office of Vocational Rehabilitation, with the assistance of States and local agencies, are attempting to demonstrate methods by which the most severely handicapped people of this country can be rehabilitated. For instance, a great majority of the research and demonstration projects have been in the areas of mental retardation, mental illness, cerebral palsy, and other chronic illness categories, which have, in the main, defied the efforts of rehabilitation people in years gone by. We believe there is much promise that these researches and demonstrations will provide a platform from which a much more intensive effort can be directed toward the solution of rehabilitation problems for these groups.

The Office of Vocational Rehabilitation has available a document which lists the projects which are underway. We assume that this has been made a part of the records of this committee when the Office of Vocational Rehabilitation had its hearing.

All of us are very much concerned that rehabilitation continue the very splendid strides it has made in recent years. A leveling off or decrease in the amount of work being done in research or demonstration will unquestionably have a disastrous effect upon future efforts to expand rehabilitation services. We urge the committee to appropriate at least $5 million for 1959 for this important work.

The second item to which we would call attention is the appropriation of vocational rehabilitation in the States under section II, particularly with respect to the allotment base. The current allotment base is $53 million. The budget has recommended an identical allotment base for 1959, although it has recommended a larger appropriation. If the $53 million allotment base is not raised, this will mean that State allotments can be no higher in 1959 than in 1958 and that only those States that have not been using their entire Federal allotments could profit from the higher appropriations that are being made. With this statement, we are attaching a sheet which shows the affect of this lower allotment base on the State programs.

In appearing before the Labor-HEW Appropriations Subcommittee of the House Appropriations Committee, we called attention to this situation and requested that the allotment base be raised to $56 million. We are happy to report that this was done. We are asking you to include in the bill as it passes the Senate the amount which has already passed the House, that is $56 million. This will encourage the continued, orderly expansion of the rehabilitation programs in the States. Incidently, an additional appropriation of only about $900,000 will be needed to meet the needs of the States, if the allotment base is raised to $56 million.

With the exceptions noted, the National Rehabilitation Association is satisfied with the bill as it is now written. We are most appreciative of the support of rehabilitation which has been given by this committee over the years. While much remains to be done, we are happy to report that progress is being made in every aspect of rehabilitation.

Effect of $53,000,000 Allotment Base on Expansion of Rehabilitation Programs in the States (Sec. 2)

Statement of National Rehabilitation Association, Washington, D. C.

The budget recommends an allotment base of $53 million for the basic support vocational rehabilitation program for 1959. The National Rehabilitation Association believes that an allotment base of $56 million is needed to provide for the orderly expansion of the program along the lines contemplated by Congress when it passed Public Law 565.

Under an allotment base of $53 million, 24 States expect to have State funds available that could not be matched by Federal funds. Thirteen of these States have already appropriated. The others have made estimates of State funds to be available. The following table lists the States that would be adversely affected by a $53 million base as compared to a $56 million base and shows how much in Federal funds each would lose under the lower base.

Arizona	$24, 416	Oregon [1]	$2, 761
Arkansas [1]	73, 111	Pennsylvania [1]	165, 656
California	27, 677	Rhode Island	11, 890
Connecticut [1]	13	South Dakota [1]	13, 742
Florida [1]	76, 293	Vermont [1]	8, 456
Georgia	101, 902	Washington [1]	35, 529
Kentucky	28, 419	West Virginia	54, 657
Louisiana	50, 500	Wyoming [1]	5, 214
Maine [1]	18, 571	Alaska [1]	4, 433
Massachusetts	20, 468	Guam	2, 204
Minnesota [1]	17, 567	Hawaii [1]	1, 002
New Jersey	49, 346		
New York	97, 013	Total	887, 396

[1] State legislatures have already appropriated.

It will be seen that an appropriation of approximately $900,000 additional will be needed, if the allotment base is to be $56 million. As indicated by the table, losses would be quite substantial in a number of States. Even seemingly small losses can be serious in States where concentrated effort is being made to expand the program.

LETTER FROM A. P. JARRELL

Senator HILL. I have here a letter from Mr. A. P. Jarrell, director of rehabilitation services, Division of Vocational Rehabilitation, Georgia State Department of Education, supporting the allotment base of $56 million for vocational rehabilitation grants. Mr. Jarrell's letter will be included at this point in the record.

(The letter referred to follows:)

STATE DEPARTMENT OF EDUCATION,
DIVISION OF VOCATIONAL REHABILITATION,
Atlanta, April, 21, 1958.

Hon. LISTER HILL,
Senate Building, Washington, D. C.

DEAR SENATOR HILL: We would like to strongly urge you and the members of your committee to approve an allotment base of $56 million for vocational rehabilitation which will provide Federal allotments substantially high enough to match State funds and an appropriation of $46,400,000 to enable Office of Vocacational Rehabilitation to match available funds.

The people in Georgia appreciate the services being provided by Vocational Rehabilitation Agency and, as stated above, have, for a number of years, allocated ample and some years more State money than necessary to match the allotment received from the Federal Government. It is a good investment for the Federal and State Governments as it not only makes taxpayers rather than tax consumers out of these people, but more important than the monetary advantages, is the fact that they become self-supporting citizens and are in position to feel they are making a contribution to society and our American way of life.

The above matter is of paramount importance to us and I am hoping that the Senate will pass the bill which has been approved by the House. I am very conscious of the fact that an increase in appropriation for national defense is necessary at the same time, but, in thinking of this serious matter, I feel it is also very vital to our present civilization to see that the disabled are provided with rehabilitation services as they can make a major contribution to the security of our country. Our active caseload is 7,291 clients and 7,667 referrals. The latter indicates the serious need for additional funds as a high percentage of these referrals would be in active status if funds were made available.

We appreciate your interst in the work of vocational rehabilitation and assure you that your support of the Department of Health, Education, and Welfare appropriations will enable the agency to help a larger number of disabled people.

Sincerely yours,

A. P. JARRELL,
Director, Rehabilitation Services.

SOCIAL WELFARE RESEARCH AND TRAINING

COUNCIL OF JEWISH FEDERATIONS AND WELFARE FUNDS, INC.

STATEMENT OF SIDNEY HOLLANDER, MEMBER OF BOARD OF DIRECTORS

WORK OF COUNCIL

Senator HILL. You know the Good Book says that the first shall be last and the last shall be first. I am sorry you had to wait so long.

Mr. HOLLANDER. I have a statement here that you can read. I want to say just a few words in reference to the contents because I think it will save time. I would first like to identify myself. I am

testifying today as a representative of the Council of Jewish Federations and Welfare Funds which is a national association of 213 Jewish federations and welfare funds representing 800 Jewish communities in the United States.

These organizations are interested in the health and welfare services of all the Jewish communities and are active in their support and the coordination with the health and welfare services, public and private alike, of the entire community. I am a former president of the council and an active member of its board of directors. In addition, I am active in other organizations which are engaged in similar work. Particularly, I served for 17 years as a member of the Public Welfare Commission of the State of Maryland, and was president of the National Social Welfare Assembly, an association of the 50 to 60 national organizations active in the field of health and welfare. My testimony today, however, is in my capacity as a member of the board of directors of the Council of Jewish Federations and Welfare Funds, Inc.

To disregard my statement I will just say a few words to you.

Senator HILL. Your statement will be in the record in full.

APPROPRIATIONS FOR DEMONSTRATIONS AND RESEARCH

Mr. HOLLANDER. The two items I want to talk about are comparatively small as far as expenditures are concerned. They are additional appropriations for research and demonstration programs in social security which involves about $2 million, and an appropriation for training grants for public welfare personnel.

We are spending in this country at the present time about $20 billion for social security and welfare services. That is just the public.

Then there are several billion dollars being spent by the voluntary agencies in addition. This is a tremendous amount of money, most of which is going for amelioration, for sustenance. Very little is being done in the way of investigating the causes of dependency, the most effective way of treating it, the way of getting people off the rolls instead of sustaining them while they are on the rolls.

We need to do a tremendous amount of investigation and it will be most profitable to the Government from the standpoint of cutting down expenditures.

PROBLEM OF FAMILY BREAKDOWNS

I am sure you have heard before from the American Public Welfare Association and from others how important it is to find out the causes of these breakdowns, of family breakdowns, of the individuals falling apart, those things that cause them to get on the rolls.

When they get on the rolls these States, the governments, are all spending these huge sums to take care of them. We need to, just as any business organization does, do something in the way of research to find out why they are on the rolls, what has happened to them, why the vast discrepancy.

For example, I am going down from here to Louisiana to make a speech before a wide group of community agencies down there. In looking up the figures that I will have to incorporate in my speech I find that under old-age assistance, for example, in Louisiana nearly 600 out of every 1,000 persons over 65 years of age are on their rolls, nearly 60 percent of their older people are being supported now pub-

licly. I compare it to my State, to Maryland, which I think is fairly enlightened, and we only have 5 to their 59, less than one-tenth as many.

Senator HILL. You have 5 to their 59?

Mr. HOLLANDER. Yes, sir; I have it right here.

I can show it to you. Here it is. They have 59 and a fraction out of the thousand. We have about five. I know that we are just as humane in the treatment of our people. We are just as eager to see that the people without resources are cared for, but something needs to be done to find out why there is 60 out of whatever that figure was—was it 100,000 in Louisiana and only 5 out of every 100,000 in Maryland.

CARE OF DEPENDENT CHILDREN

When I look to the care of dependent children I find the same discrepancy. I know that there are different procedures being followed in the different States as to the persons that are eligible and what is done for them. Yet the deviation, the discrepancy, is enormous. The relationship is every one of our larger communities, in Alabama, in Maryland, everywhere, between the voluntary agencies and the public services needs to be explored. The public services do the wholesale job. The voluntary agencies do the retail job. Together they are supposed to cover the entire gamut.

In some places the relationship is excellent. They do a fine job. In others, they do a very poor job. There needs to be some examination to find out how to do this much more effectively. I cannot imagine any business in which the expenditures would be as huge as they are in this, and so little research as to find out what the causes are and how to achieve the end that we have in mind.

The President last year recommended an appropriation of $2 billion. I attended all meetings of the National Social Welfare Assembly, being on their board and executive committee, and I find that this area of research is one of the things that they are most interest in and most eager to have undertaken because it affects basically the programs of every one of them.

I have in my statement a more formal presentation of our reasons, but I am simply presenting it to you as one businessman to another or to a lawyer to indicate that you cannot run an operation of this sort without knowing one of the basic factors so that you know how good your processes are and to what extent you are achieving your purposes.

TRAINING PROGRAM

The second item I will make equally brief is in regard to the training program that was recommended by the President last year that you are fully familiar with but involved about $2 million for training. Here is his public program of the Federal and State Governments. I get around a great deal and talk to the administrators of it. I find out that this program is being administered with about less than 4 percent of those who are carried on that have had adequate professional training. Less than 20 percent have any training at all. They just bring people in, the best people they can get, and Heaven knows I admire their efforts in trying to do this, but less than 4 percent are trained personnel.

Some of these persons spend or authorize expenditures of as much as $100,000 a year. You cannot do that kind of work effectively without training, without some background of training and experience.

STAFF SHORTAGES

In New York, recently, we made an investigation of what the shortages were in trained personnel there, covering the whole city of New York. We found that the shortages on staff ranged from 4 to 66 percent. A program is nothing but a piece of paper unless it can be effectively administered and carried out by people that know their stuff.

The same situation in New York is worse in the rest of the country. Everywhere I go they tell me, "We cannot do our job properly, we cannot get the trained personnel to do it."

I happen to be the chairman of the nationwide citizens committee to stimulate recruitment in social work carried on by the council in social work education. We think we will be able to get the backing of the Advertising Council of America to put on a nationwide program for us without charge because they are so convinced of the importance of this. But that will not do much for the public services. That is going to help the voluntary agencies. I am interested in the public services. As a businessman I feel we have an obligation to get this somewhere near a dollar's worth of value for a dollar that is spent. We simply cannot do it with this shortage that exists.

ADDITIONAL STAFF FOR REDUCTION OF ASSISTANCE CASES

I do not know whether this has been called to your attention or not, but a study was made in Allegany County a year ago where they took about 700 people I think that were on public services and instead of being helped by the public services and instead of them being carried for the rest of the program they put 4 trained social workers on and 1 clerical worker on that worked with them for about 11 months. The results were simply astounding. The number of persons that they got off the public rolls, restored to self-support, to normal community relations, was simply tremendous.

With that little group they saved $26,000 that they had been expending for public services and they restored the very large percentage of them to useful activity.

There is at the present time a shortage of about 10,000 social workers in the country for whom jobs are now available, for whom appropriations have been made. There are no people to get them. Now here was an effort to have the Government undertake this modest program, I think it was $2 million, to start training for the public services.

Now we in the voluntary agencies give scholarships to those that we send off to be trained. But as a result of those scholarships they have to come back to our agencies that put up the money. They do not go into the public services which I venture to say need it even more desperately than we do.

There are other people waiting here to be heard. I suppose you will have a chance to read my document.

Senator HILL. I assure you I will because you have made a most interesting statement.

Mr. HOLLANDER. I would like to emphasize these two things. Research on the causes of dependency and better methods of getting people off the rolls and back into private life, self-support, and certainly to see that a modest number of persons are trained for the public services so that they will be able to spend this money effectively, not only for the sake of economy but also to give greater help to the people that they are trying to serve. It does not do a bit of good to keep a person on the rolls for the rest of his life. You are really doing something for him if you get him off the rolls and back into self-support.

Senator HILL. You have made a most enlightening statement which will appear in full in the record, Mr. Hollander, and I want to thank you.

(The statement referred to follows:)

STATEMENT ON BEHALF OF THE COUNCIL OF JEWISH FEDERATIONS AND WELFARE FUNDS, INC., BY SIDNEY HOLLANDER

TESTIMONY IN SUPPORT OF AN APPROPRIATION FOR A COOPERATIVE RESEARCH AND DEMONSTRATION PROGRAM IN SOCIAL SECURITY AND AN AMENDMENT ON AN APPROPRIATION FOR TRAINING GRANTS FOR PUBLIC WELFARE PERSONNEL

Mr. Chairman and members of the committee, I am testifying today as a representative of the Council of Jewish Federations and Welfare Funds which is a national association of 213 Jewish federations and welfare funds representing 800 Jewish communities in the United States. These organizations are interested in the health and welfare services of all the Jewish communities and are active in their support and their coordination with the health and welfare services, public and private alike, of the entire community. I am a former president of the council and an active member of its board of directors. In addition, I am active in other organizations which are engaged in similar work. In particular, I served for 17 years as a member of the Public Welfare Commission of the State of Maryland, and was president of the National Social Welfare Assembly, an association of the 50 to 60 national organizations active in the fields of health and welfare. My testimony today, however, is in my capacity as a member of the board of directors of the Council of Jewish Federations and Welfare Funds.

The council recommends that the Senate amend the House appropriation bill for the Department of Health, Education, and Welfare to include an appropriation of approximately $2 million for the fiscal year 1959 to launch the cooperative research and demonstration program authorized in 1956 by section 1110 of the Social Security Act as amended. In addition, council recommends a similar amendment to provide $2 mlllion for the fiscal year 1959 to launch the program of grants to States for the training of public welfare personnel which was authorized in 1956 by section 705 of the Social Security Act as amended.

Let me first address myself to the proposal for an amendment on cooperative research or demonstration projects. What is requested here is that the Congress provide the funds which would permit the Department of Health, Education, and Welfare to operate its $3 billion a year program in the field of public welfare on a businesslike basis. Can you imagine any large corporation operating on an annual expenditure of better than $3 billion a year which does not conduct some research into the methods of carrying on their business efficiently and economically? Nowadays, it goes almost without saying that any efficient, large business requires a continual review of operations, continual research into areas of possible loss or improvement of methods of operation so as to increase the efficiency of the organization, and finally, including the objective of finding new or better ways to transact business or improve service.

The conduct of the $3 billion a year public welfare business in which the Government is engaged is no less important and requires no less than the fullest use of the tools of research and demonstration in order to make sure that the best ways of carrying on business—welfare or any other—are found.

The Congress has already been very generous in making this principle effective in the field of health. Its annual appropriations for the last several years to the health institutes have been generous and important, and the generosity of the Congress in supporting extended research and demonstration in the fields of cancer,

heart, mental health, etc., is to be commended as a fine recognition of the necessity for continually improving the health of the Nation. Well, the public welfare programs are no less important. Their programs too require continuous research and continuous improvement in order to assure the best welfare of the Nation.

I do not wish to imply that there has been absolutely no research in this field. There has been some. Some private social agencies, some universities and some State welfare departments have conducted experiments in this field and some of these have proved of very real value. However, the great bulk of the money expended for welfare comes from the Federal and State Governments and the amount of research which can be done with funds from private sources is not at all adequate for the job to be done. The 1956 act provides that grants may be made for such projects as:

1. relating to the prevention or reduction of dependency; or
2. which will aid in effectuating coordination of planning between private and public welfare agencies; or
3. which will help improve the administration and effectiveness of programs carried on or assisted under the Social Security Act and programs related thereto.

It certainly makes sense to look into ways of preventing or reducing dependency and many of us believe it is possible, through careful research, to prevent or reduce dependency in, let's say, the aid to dependent children load. The ADC load presents a very important opportunity for social research. It constitutes nearly 40 percent of the whole public assistance caseload in the United States, and in some parts of the country exceeds even old age assistance. An attempt could be made through research and demonstration to formulate tested judgment as to those factors which are favorable to stimulating return to self-support and those which work against that objective. For instance, there is a good deal of interest in experimenting with what constitutes the causes of dependency for the so-called hard core dependency families. In some families, for instance, it is well known that dependency is often associated with a passive reliance on others for help. Can this be overcome, and if so, how? This is the kind of subject which requires careful research if we are to improve the efficiency of the system, without at the same time hurting the families we want to help.

In the field of the aged, for instance, there is a whole host of problems for which experiment is necessary. How can the economic, health, and housing needs of older people best be met? Can the Government help institute programs which will keep down the dependency of old people on outside help while at the same time make it possible for them to live more satisfying lives?

I could go on this way enumerating areas of possible research, but the objective is clear. Congress has already recognized its responsibility for research of this kind in passing the 1956 act authorizing this research and demonstration. It is good business for the Government to sponsor it. And just as the Congress has shown good judgment and business sense in supporting this type of research in the health field, so now we recommend that the Congress extend this principle to the field of public welfare.

Now I come to the question of grants for the training of public welfare personnel. The interest of the Council of Jewish Federations and Welfare Funds in these grants arises from our overall concern with health and welfare services and the shortage of trained social work personnel to operate them at their greatest efficiency. Both the private and public fields are partners in welfare. There is a common use of services, a common concern for the well-being of the American people, and there is often an exchange of personnel.

At the present time, there is a serious shortage of trained people in all the welfare services. The Jewish field of communal services is relatively small; an employed professional personnel of about 3,000, but with about 1,000 vacancies. The personnel employed in all private and public services in this country are estimated at 100,000 with only about 25 percent adequately trained. The present shortage has been estimated at 10,000. The training necessary both for public and private services is the same; 2 years of graduate study in a school of social work, involving both class and field work.

We know from experience that there are many people who are interested in social service as a career, but cannot, for financial reasons, undertake the required intensive training which is both needed and desirable. Over 80 percent of those currently in schools of social work are receiving some kind of financial assistance, and the majority of these cannot, on graduation, go into public services because they are on scholarships which commit them to work in the agency which has granted them the assistance. Training grants would begin to assure the public

services adequate and trained personnel, and with such personnel there would be reasonable assurance that the billions of dollars spent for public services would be adequately and soundly operated. Toward this objective, the council recommends that the Congress appropriate $2 million for fiscal year 1959.

Thank you very much for this opportunity to present our point of view. We are convinced that the small amounts requested for research and for training in this important field of public welfare would be a sound investment from both a humanitarian and a business point of view.

AMERICAN FEDERATION OF LABOR-CONGRESS OF INDUSTRIAL ORGANIZATIONS

STATEMENT OF HYMAN H. BOOKBINDER, LEGISLATIVE REPRESENTATIVE

SUNDRY ITEMS IN LABOR-HEW APPROPRIATIONS

Senator HILL. Mr. Bookbinder. Glad to have you with us again.

Mr. BOOKBINDER. Mr. Chairman, I am glad to be here. I appreciate it very much that you have accommodated me by making it possible for me to come here.

Senator HILL. I am glad to have you.

Mr. BOOKBINDER. We have an extensive statement as you see and I hope that it will get into the record.

Senator HILL. We will get it in the record in full.

Mr. BOOKBINDER. I will take less than 10 minutes to point out a few highlights.

I was listening to the very interesting testimony all morning and I am reminded again of the obvious fact that we do not come to you with expert testimony. We are not specialists in each of the many areas we are interested in. We come more as a friend to the court because representing as we do many millions of workers and their families we have a great interest in many parts of the Labor-HEW budget as you know.

Senator HILL. You are interested in the whole human welfare program?

Mr. BOOKBINDER. That is right, sir. We try to do our bit in encouraging parts of the program that need this kind of encouragement. I know we do not need to do much urging with you personally so I am content to have the record show our interest in all of these things.

I would like to take just a very few moments to highlight some of our special considerations.

IMPLICATIONS OF PRESIDENT'S BUDGET

First, a general word about the budget. We are concerned about the implications of this budget as submitted by the President. We think it shows kind of a timidity and lack of faith in our economy which unfortunately is reflected in many specific recommendations. There is contained in this budget a warning that this administration intends in the years to come, and it started this year to reflect the recommendations of the joint Federal-State action committee, which means this Government would be receding in a number of vital areas where it has made such a vital contribution like education and vocational education and water pollution. At the appropriate time and

at the appropriate committee we hope to be represented so we can voice our objections.

Specifically since this budget has been prepared by the administration there have been some important developments, mainly the Russian scientific advances, and our own economic downturn; and the budget does not reflect each of these major changes in our American economy. We are hopeful that to some extent any way the changes are made by the Congress will reflect these two great challenges.

CITY WORKERS FAMILY BUDGET OUTDATED

As to some of our specific recommendations I will only take very few. In the area of the Bureau of Labor Statistics Mr. Chairman, we are making a very urgent appeal to the Congress that the Congress indicate its interest in having the city workers family budget restored and brought up to date. We are very much gratified by the fact that the House committee recognized our plea in this area and in its report did call upon the Bureau of Labor Statistics to bring the work on city workers family budget up to date. It has been several years now since this data has not been available. It is very important that we know what a modest budget costs a typical overall worker's family.

We are hopeful that BLS will do this work.

PRODUCTIVITY AND AUTOMATION

In the area of productivity and automation specifically we regret that the modest request urged by the administration has been rejected by the House. We earnestly request that you restore that amount of money. It is a very modest amount. It does not begin to do the job that we think is necessary.

COMPLIANCE WITH WAGE-HOURS IN RECIPROCAL TRADE

One final matter in the statistics area. As you know there is currently a very, very serious debate about the effect of the reciprocal trade program, and one of the pieces of data that is simply not available to answer the speculation is just what is the effect of our total imports, total exports, what would be the effect in employment by one type of reciprocal trade act or another kind. We are floundering in this. All kinds of assertions are made and it challenges are made. For a very small amount we believe the $100,000, which the President requested last year and it would do the job.

We think the compliance in the act is still very poor in regard to the wage and hour law and adequate appropriations are needed.

Senator HILL. The additional personnel?

Mr. BOOKBINDER. Get the personnel, train the personnel adequately. For some reason the administration lowered the last year's item by the $100,000. This does not make sense to us from any point of view.

MEDICAL RESEARCH

In the area of medical research we just want to salute you again, Mr. Chairman, and this committee and the Congress for not limiting itself to the recommendations of the administration. Again the

administration has shown timidity by asking for the same dollar amount, a dollar amount which cannot even purchase the same amount of medical research that we have had in previous years. The work of this is not to be measured in statistics, it is to be measured in lives which might have long since ended, in healthy bodies which might still be diseased and crippled, in hopes shared by millions where once fear played its ugly role.

There is no greater accomplishment that this committee has done or could do than in this area of medical research.

HOSPITAL CONSTRUCTION

We want you to know, Mr. Chairman, that in the case of hospital construction we are asking again for the maximum appropriation possible. Only last week we testified to a House committee urging the Hill-Burton Act renewed for 10 years and increasing the authorization to $400 million to affect both increased building costs and the continuing great need in this vital area.

RADIOLOGICAL HEALTH

In radiological health we were pleased initially to see a request for an additional $215,000 for radiological health activity in the Public Health Service.

We regret that the House reduced that suggested increase by $90,000 and we ask for restoration of at least that amount.

RAISE FUNDS FOR CHILDREN'S BUREAU

One final item that I want to mention orally. The others will be in the report. I want to endorse the recommendation I know which has been made to you ov r and over again that the Children's Bureau money for child welfare services be raised to the maximum that you can.

Unfortunately, it is only $12 million.

I rushed through this in an attempt to get through quickly. Do you have any questions?

Senator HILL. I assure you that I shall read your statement and read it carefully. I realize that you represent many fine people who are deeply interested in the subject before this committee and we certainly appreciate your being here and making the presentation you have this morning. It has been most helpful. Thank you, sir.

(The statement referred to follows:)

I appreciate the opportunity once again to appear before this subcommittee to present the views of the AFL–CIO on the budget proposals which affect so vitally the welfare of America's wage earners and their families, as they do all Americans.

Last year, during the first session of this 85th Congress, I appeared before this subcommittee and presented a rather detailed statement which made reference to almost every Bureau and Division of the Departments of Labor and Health, Education, and Welfare. Because this statement is a matter of record, I will not burden these hearings with a repetition of our support for adequate appropriations for the many activities of these important departments. I have carefully reviewed last year's statement and wish to reaffirm in general all of our recommendations for expanded activities of a number of bureaus. In the following statement, I wish to make some general observations about the budget proposals and then pinpoint a number of specific problem areas.

Labor is disturbed at the implications of the President's budget. The budget reflects backwardness, timidity, and a basic lack of faith in the American economy. It is based on the mistaken notion that this country cannot afford both defense and provisions for the general welfare. It reflects the administration's acceptance of the philosophy of the Federal-State Action Committee that the Federal Government is doing too much in the field of general welfare. It places the goal of a balanced budget ahead of the goal of meeting all of America's needs.

This subcommittee, of course, can deal only with specific appropriation requests for fiscal 1959. But I hope I may be permitted to observe that the President's budget contains warnings of a broadside attack on the whole gamut of welfare legislation, the financing of which is the important business of this subcommittee. The ax has not yet fallen, but unless this committee, and the Congress generally, and the people all over the country indicate early and strongly their disagreement with the philosophy expressed by the President, the administration's 1960 budget will look a lot different from the one presently under consideration.

At the recently concluded meeting of its executive council, the AFL–CIO took note of this ominous threat when it declared:

"If the budget recommendations of President Eisenhower are not reversed, much of the social welfare legislation enacted since New Deal days is going to be terminated or whittled away. President Eisenhower says the dismantling process must be undertaken right away with appropriate congressional action. Then, in fiscal 1960, the actual cuts can be gotten underway." (See appendix for full text of AFL–CIO statement.)

The President's warnings are not vague. Vital programs like vocational education, school assistance in impacted areas, water pollution, and public assistance are among the specific targets which fall in the jurisdiction of this subcommittee. It is the hope of the AFL–CIO that this subcommittee, and then the full Appropriations Committee, will indicate their disapproval of the administration orientation by granting the full needs of these and related programs.

In his budget message, the President gave clear warning that he intends to go even further in eliminating current Federal programs. He stated:

"Continuing work by the Joint Federal-State Action Committee, as well as throughgoing reappraisals by Federal agencies on their own initiative, should lead to further recommendations for reducing grant-in-aid programs in future years, with the States assuming more of the responsibility for their activities and themselves collecting more tax revenues to finance them."

The AFL-CIO executive council statement points out that Federal programs which are now threatened have come into existence in the first place because many problems are nationwide in scope and can be treated only nationally; because higher minimum educational, health, and welfare standards for all Americans involve the well-being of the entire Nation; because many States and localities do not have the financial resources to provide these minimum standards; and because only the Federal Government is sufficiently powerful to insure an adequate and just tax contribution from those best able to make such contribution.

THE 1959 BUDGET

Work on the 1959 budget started before sputnik became a household word and before the seriousness of our economic downturn was apparent. Both from public statements and from other sources of information, it is clear that every Government department was under strict orders from the Budget Bureau to pare every request down to rockbottom. Last year's hue and cry about a huge budget was to be avoided; the budget must be balanced and as large a surplus as possible shown. Except under the most unusual circumstances, the current appropriations levels were to be considered maximum, and every budget officer was to see how much he could reduce those levels.

There is no ground for satisfaction that, by and large, the budget requests for 1959 for the Labor and HEW Departments are approximately equal to the actual levels of appropriations for fiscal 1958, since the latter represent inadequate levels in a number of important areas. They reflect the cuts made by the Congress in its economy wave last year, on top of the inadequate proposals made by the administration in the first place. We cannot be satisfied with standing still.

Both the Secretary of Labor and the Secretary of Health, Education, and Welfare have indicated their complete support for and interest in the programs under their jurisdiction. Considering the pressures under which they operated, they are to be congratulated for having obtained the budget requests that are

before you. But it is hard to believe that they are satisfied, in all cases, with the levels approved by the Budget Bureau and the President, or that they would be displeased to have the Congress increase some of these levels.

Between the time of the initial work on these budget proposals and the actual submission to the Congress, the Russian sputnik created new challenges and new considerations. Moreover, the economic downturn has made the goal of a balanced budget even less justifiable than it might normally have been. Very little in the budget, however, reflects these new factors. Maximum assistance to education at all levels and in all forms is so urgent, for example, yet the total budget requests for education are lower than the total requests last year.

It will be up to the Congress to improve upon the President's budget requests in light of Russian scientific advances, in light of the economic downturn, and in light of the many unmet needs of the American people in the fields of labor, health, education, and welfare.

AFL—CIO RECOMMENDATIONS

In the paragraphs that follow, I will present a series of specific recommendations in as brief a form as possible. In many cases, there are other groups more peculiarly qualified to present documented testimony and I am sure the subcommittee has received or will receive such testimony.

1. Office of the Solicitor

The work of this office suffers, and therefore the enforcement of our labor laws suffers, when funds are inadequate. Last year, the Congress cut the President's request by about $200,000. This can only mean that needed work is going undone.

Part of the present and proposed appropriations are used in connection with the Bacon-Davis provisions of the highway program. H. R. 11645 reflects the decision of the House this year that the funds for this program should come from the General Treasury. For this purpose, the President's request has been increased by $200,000. Whether one source or another is used for the funds, it is important that adequate funds be made available so that work on the program may proceed without delay.

2. Labor standards

We renew our support for expanded activities in this Bureau for work on legislative standards, migratory labor, youth employment and physically handicapped.

We do not believe that with the funds requested for this Bureau an adequate job can be done in the control of radiation hazards. The importance of such work cannot be overstressed. It is essential to the peacetime use of atomic energy that effective health and safety standards be developed and applied to control the special hazards of radiation. Uniformity in such standards and in the administration thereof is vital.

We are disappointed that the House reduced the proposed increase for the President's Committee on National Employ the Physically Handicapped Week from $19,000 to only $10,000, and that no increases were authorized for the programs listed earlier.

3. Labor Statistics

We renew our request that additional moneys be provided the BLS so that it could substantially increase its activities in the wage and collective bargaining field, in the field of housing and construction statistics, and the field of productivity with special emphasis on impacts of automation.

Substantial improvements are needed in our knowledge of productive efficiency—in the development of productivity data and the analysis of such data. This is important for economic analysis and for the development of private and Government policies affecting our national economy and its growth.

To answer questions concerning our Nation's areas of productive weakness and productive strength—and to develop policies that would help to increase our productive strength—we need much better information, than is now available, on productivity in the various industries and segments of the national economy. In addition, we are in need of much better information, than we have, on automation and technological change and their social and economic effects.

For these reasons we are greatly concerned over the failure of the House to approve even the minor increase of $85,000 requested for the BLS for the expansion of its program of productivity measurement.

City workers family budget.—We wish to call to the attention of the subcommittee a matter of serious import. One of the most valuable of all studies which the BLS has ever published is the city workers family budget. This series was initiated at the specific recommendation of the Congress back in 1945 when the desire was expressed to find the number of actual dollars required for "the average worker in overalls" to live in the large cities of the United States. Such a budget was originally priced as of March 1946 and June 1947, then repriced in October of 1949, 1950, and 1951. Since that time, however, there has not been any revision.

In 1952, the Bureau took the position that it should not reprice the budget since the expenditure study on which it was based was out of date. Since then, however, some work has been conducted both by the BLS and by the Wharton School, under a grant from the Ford Foundation, which puts the Bureau in a position to work out quantities for the revised budget. The items included in such a budget, however, will have to be priced and for this the Bureau states that it does not have adequate funds.

The city workers family budget has been a most useful tool for appraising conditions of living for American families. It is an important guide to action on wage policy, tax policy, and related problems. The AFL–CIO urges this subcommittee to call upon the BLS to proceed with its work on the family budget to conclusion and publish the results as soon as possible for a representative group of cities. It is our understanding that this work could be completed at relatively little expense. If the Bureau cannot complete this work without additional funds, it should be directed to submit its needs forthwith. It is our judgment that work on this aspect of the cost of living problem is as important as any other work now being done at the Bureau.

We are pleased that our request in this connection was noted in the report accompanying H. R. 11645, which stated: "The committee was impressed with the testimony it received concerning the need for repricing the city workers family budget." We trust that the Senate will agree as to the need for completing this work.

Construction statistics.—There are disquieting rumors that consideration is being given to the suggestion that responsibility for construction statistics be transferred to the Department of Commerce. The AFL–CIO respectfully suggests that this would be a serious mistake. The Bureau of Labor Statistics has had many years of valuable experience in this field and has developed a high degree of professional competence. Its work in this area is highly regarded everywhere. To transfer this now to another department would invite unnecessary complications and difficulties. This is not meant in any way to reflect upon the integrity of Commerce Department personnel who have developed competence in their own fields of specialization. Recognition of the high-quality work by the BLS in this area by the subcommittee would be helpful in keeping this function where it has been so ably carried out.

Effects of foreign trade.—The Congress last year disallowed the President's request for $119,750 to permit the BLS to study the effects of foreign trade on employment. The current debate on renewal of the Reciprocal Trade Act would be helped if this information were available. We are handicapped by lack of satisfactory data concerning both the number of workers displaced by imports and the number of workers whose jobs are dependent upon international trade. Unfortunately, the present budget request does not contain funds for this purpose. Notwithstanding this regrettable omission, we urge the subcommittee to provide funds for this important study.

4. Wage and Hour and Public Contracts Divisions

Last year, the Congress reduced the President's request for the Wage and Hour and Public Contracts Divisions by $288,000 despite the recommendation of the Appropriations Committee for the full amount. This year, the President not only failed to request the level he proposed for fiscal 1958 but has reduced the amount by another $100,000. We cannot believe that those responsible for administering this very important Division are themselves persuaded that a proper job of enforcement and administration can be carried out at the suggested level.

In its report, the House Appropriations Committee refers to a compliance survey conducted by the Wage and Hour Division during the past year to determine the extent of noncompliance with the wage and hour law. That survey revealed the shocking fact that during the past year minimum-wage underpayments amounted to approximately $19 million and a total of 600,000 employees were denied overtime payments amounting to $64.1 million to which they were entitled under the law. On the basis of this report, the House Appropriations

Committee stated: "It is obvious that the Wage and Hour Division is not doing more than scratch the surface in actually locating violations and, if the results of the survey are valid, the goal of securing compliance is still a longways off."

In view of the continued widespread violations of the laws, it is clear that a further reduction in operation will only give more encouragement to unconscionable employers to chisel on their lowest paid employees. We therefore urge that despite the recommendation of the President there be no reduction in the appropriation for the Wage and Hour Division.

We welcome the increase in the annual number of determinations of the prevailing minimum rate under the Walsh-Healy Public Contracts Act from 5 to 7 a year. Even so, however, at the rate of seven determinations a year, there will continue to be no minimum wage determinations at all in many industries in which there are Government contractors and even for those industries for which determinations have been made, a high proportion of obsolete determinations will remain in effect. We therefore urge that sufficient funds be appropriated to permit a minimum rate of 10 determinations a year. It is our understanding that this would be possible with an additional appropriation of less than $60,000.

5. Bureau of Employment Security

The request for this agency will permit an additional 6 staff positions for the Unemployment Insurance Service at the Federal level (from 100 to 106) but at least 15 more professional people are needed for evaluation and demonstration studies in benefit adequacy, postexhaustion studies, appeals experience, definition of attachment to labor force, and other important studies. Federal leadership in unemployment insurance depends upon this kind of research work.

6. Mexican farm labor program

The House of Representatives has appropriated only $480,600 for the Mexican farm labor program. Because of a point of order raised on the House floor, an additional amount of $1,550,000 to be derived by transfer from the farm labor supply revolving fund was stricken from the bill. The Director of the Bureau of Employment Security has testified before this subcommittee that the program must cease if the House action stands.

In our judgment, even the full budget request—regardless of the source of the funds—is inadequate to do the necessary job. The Congress, we say most frankly, is faced with a basic policy decision. If the Mexican program is not worth proper enforcement, then it should be legislated out of existence. Ironically, however, many of those who refuse to appropriate adequate funds for the program are stanch champions of the program itself. But the American people generally do not favor retaining a program enforced in such a way that it deprives American workers of decent farm jobs through the expedient of hiring Mexican workers at sweatshop wages and transporting and housing them under almost feudal conditions.

7. Bureau of Apprenticeship and Training

The proposed increase of $300,000 for this Bureau will help provide greater service to both industry and workers. With rapid changes in technology and the development of new industries, the need for all types of apprenticeship and training is greater than ever. The AFL–CIO hopes the Congress will go along with this very modest, but important, increase.

We are pleased to note the House report that "the people concerned are much more in agreement than was the case a year ago." The Secretary of Labor has given the Congress assurance that the Department intends only to promote, not to do, training. In light of this, the AFL–CIO believes the funds should be made available without further delay.

8. Medical research

This subcommittee can take great pride in the tremendous good it has accomplished for all Americans, and for all the world, as a matter of fact, through its support of the National Institutes of Health, uninhibited by the timidity shown by the President's budget requests in the last several years it has made its own painstaking appraisal of needs in this top priority program and has recommended higher levels. Its work is measured in lives which might have long since ended, in healthy bodies which might still be diseased and crippled, in hopes shared by millions where once fear played its ugly role.

The administration again asks that we be satisfied with what we are now doing. The AFL–CIO again calls upon the Congress to use one criterion, and one criterion only, in setting the level of appropriations: How much money can the Institutes

and the professional groups of the country use intelligently and constructively?

With costs going up, the same level of appropriation for medical research must mean less actual research. With so much remaining to be done in cancer, heart, mental health, and other vital areas, we cannot believe that the American people will be satisfied to reduce the level of medical research supported by the Federal Government.

The House is to be commended for increasing the budget request for the National Institutes of Health by $8,200,000. Another $6,748,700 would be available for the program through shifts from overhead, under the action of the House.

9. Hospital construction

For some years now, the AFL–CIO has been urging the Congress to appropriate the full amount authorized under the Hill-Burton Act for construction of hospitals and other health facilities. This year we renew our request for a $210 million appropriation for two basic reasons:

(*a*) The Public Health Service has reported that as of July 1, 1957 there was a demonstrated shortage of close to 900,000 hospital beds throughout the country.

(*b*) Increased construction activity can be an important spur to general economic recovery. Certainly, hospital construction should be given the highest priority for federally assisted construction projects.

The President's original request for $75 million would have meant an inexcusable reduction in the present level. Even his later recommendation that the present level of $121,200,000 be retanied, however, is far from adequate. The AFL–CIO believes the full $210 million should be appropriated as a matter both of national need and economic wisdom.

Last week, testifying before the House Interstate and Foreign Commerce Committee, AFL–CIO representatives urged a 10-year renewal of this vital hospital construction program with an authorization of $400 million a year for new construction and an additional $100 million a year for improvement and modernization of existing facilities. We believe that these levels are needed to reflect increased construction costs and to have any serious effect on the shortage of beds.

10. Radiological health

We are glad to note the requested increase of $215,000 for radiological health activities of the Public Health Service. With increased programs in atomic energy—both military and civilian—it is of the utmost urgency that there be developed public-health techniques for controlling radiation hazards. State and local personnel must be trained, and information of all kinds must be given the widest possible dissemination.

The AFL–CIO lists among its members many of those workers now engaged in the development of atomic energy, to say nothing of the many millions of our members and their families who live in the areas affected by atomic energy operations.

We are disappointed in the action of the House in reducing the requested level by $90,000. This can only mean less expansion of this vital work in radiological health. We urge the Senate to restore this amount.

It would be the most inexcusable kind of recklessness to do one whit less in this field than is required.

11. Other Public Health Service activities

We are concerned with the reduced levels proposed for the control of veneral diseases and for communicable disease activities. The National Tuberculosis Association proposal that the TB level be raised to $7 million should be given very serious consideration, as should its recommendation that there be a $5 million addition to the proposed level for Indian health activities.

Appropriation of the full amount requested for the water-pollution program could constitute a declaration by the Congress that it approves of the continuation of this vital assistance to the States, and does not welcome the suggestion of the President that the program be discontinued after 1959.

12. Education

As in the case of water-pollution control, the President proposes that the exceptionally successful program of Federal grants for vocational education be abolished after 1959. For 1959, however, he recommends the full amount authorized, $33,750,000. The AFL–CIO hopes the committee will approve this amount and also indicate its support for continuation of the program beyond 1959.

The proposed increase of $950,000 for the operating budget of the Office of Education is the least that the Congress should approve. The extra money is needed for studies of educational organization, methods, and curricula in other countries, and for the dissemination of information on the organization, financing, and operation of education both to the education profession and to the general public. Support for cooperative research would also be helped by a proposed increase of $400,000.

The House has allowed only $800,000 of the proposed increase of $950,000 for the Office of Education. It is difficult to understand this reduction in light of the very strong statement in support of the Office in the report of the House committee. We respectfully urge the Senate to restore the $150,000.

It is difficult to believe that the administration has failed to recognize the great amount of good for rural libraries already done by the Library Services Act. Last year, the Congress increased the budget request from $3 million to $5 million, but for 1959 the President again recommends the lower figure.

The action of the House in raising the level to $5 million is very welcome, but the AFL-CIO supports the request of the American Library Association for the maximum allowed under the basic law, $7,500,000.

13. Vocational rehabilitation

We welcome the increase of $4,100,000 in this important program. Even with this increase, however, it must be kept in mind that no more than 85,000 completed rehabilitations will be possible in fiscal 1959. Our national goal should be at least 200,000 a year. The subcommittee should approve this increase plus whatever additional amounts it feels can be met by State matching funds as required by the law.

In connection with this item, we would like to express the hope that the funds allowed will permit a generous appropriation to the National Orthopedic and Rehabilitation Hospital in Arlington, Va., to permit it to carry out its national pilot project. The hospital's plans are based on hospitalization of 36 patients and outpatient care for approximately 100 cases. It will be recalled that organized labor thought so much of the center that it furnished all the labor required to build the 5-story structure.

14. Social Security

We regret that the administration has failed to renew its request for two important and inexpensive projects: (1) Grants to States for training of public welfare personnel, and (2) social security research and demonstration projects to explore causes of dependency and gaps in social security.

As indicated above, we are greatly disturbed at the suggestion of the President that in the field of public assistance "the States should have greater responsibility * * *" and that he will be sending proposals to Congress "* * * for modernizing the formulas for public assistance with a view to gradually reducing Federal participation in its financing."

Although the budget request for fiscal 1959 does not reflect this unfortunate orientation, the AFL–CIO takes this opportunity to state its unalterable opposition to any decrease in Federal participation in public assistance activities. Such could only mean that the States and the people needing the assistance most would suffer the most.

The House action in raising the Children's Bureau appropriation for child welfare services from the requested $10 to $11 million is very much in order. It is our hope, however, that the Senate will add still another $1 million and bring this item up to the authorized limit of $12 million. It is our further hope that the Congress will soon inact a substantially higher authorization for this important activity. Until that time, certainly the full $12 million should be appropriated.

Administration expenses for the Bureau of Old Age and Survivors' Insurance should be adequate to meet the extra burdens caused by increased coverage and claims loads. The Bureau's failure to handle claims within its goal of 30 days is very regrettable.

Appendix

Statement of the AFL–CIO Executive Council on the Attack on Federal Welfare Program

If the budget recommendations of President Eisenhower are not reversed, much of the social welfare legislation enacted since New Deal days is going to be terminated or whittled away. President Eisenhower says the dismantling process

must be undertaken right away with appropriate congressional action. Then, in fiscal 1960, the actual cuts can be gotten underway.

Federal aid for vocational education and the construction of water purification facilities should be ended completely, according to President Eisenhower.

In addition, the President proposes that Federal grants to help States and localities finance assistance for the aged, dependents, and the disabled, for hospital construction, urban renewal, slum clearance for schools in federally affected areas, and for natural disaster relief should all be whittled down in 1960 and thereafter.

Also, the President wants the Congress to alter other programs in a manner that will raise borrowing costs for home purchasers, for college dormitory construction and for financing rural electrification and telephone cooperatives.

Veterans' benefits also will be cut, according to the President's plans.

Furthermore, farm-price supports are to be reduced still further and the acreage reserve plan is to end completely without, however, providing an alternative program to effectively raise the sagging income of farm families.

In addition, earlier administration pledges to support new civilian services—like Federal school construction aid and assistance for chronically depressed areas, are now completely forgotten.

Today, national defense and war related expenditures absorb 80 percent of our total Federal budget. The President does not argue, however, that the 20 percent that is now being stretched to cover all federally supported civilian service needs must be cut because of the national security emergency.

On the contrary, the assault on the welfare program has long been gathering force. Six months ago, a special joing action committee was set up at the President's instigation to recommend which Federal grants should be the first to go. Even before sputnik was launched, the chamber of commerce was ready to report with satisfaction to its readers that:

"An historical shift in the Eisenhower administration policy may become apparent in the next few months. If carried out successfully, it would change the course of recent Federal-State-local relationships involving billions of dollars in tax money. It could lead to abandonment of a number of proposed programs that have previously been warmly embraced by the administration."

The long-time crusade of the chamber of commerce and National Association of Manufacturers against the Federal welfare programs—which the President now supports and which he is now asking the Congress to endorse—would, indeed, cause a shift "involving billions of dollars in tax money." It would be a shift entirely to the liking of our wealthiest individuals and our largest corporations.

The ostensible purpose of this "States' rights crusade" is to force the States and localities to assume "their" responsibilities.

But, already these State and local governments are themselves raising the revenue for more than 70 percent of the cost of all civilian public services in the United States, and each year their burden is becoming greater.

If the Federal civilian programs are further whittled away and the States and localities are forced to assume even more of the public service load, still more of the cost of Government will be imposed upon the low- and middle-income families of the Nation. This is because most State and local taxes are regressive—proportionately they take more from those who are least able to bear the load.

In our increasingly industrialized and interdependent society, the role of the Federal Government in helping finance civilian services must inevitably become a larger one.

In the first place, many civilian problems have become nationwide in scope, and only a national effort can resolve them.

Secondly, higher minimum educational, health, and welfare standards for all Americans involve the well-being of the entire Nation. Experience has shown that many States and localities do not have the financial resources to provide these minimum standards; Federal aid is essential.

Finally, only the Federal Government is sufficiently powerful to insure an adequate and just tax contribution from corporate profits and the incomes of the wealthy, to help support the minimum civilian public service programs which our expanding population needs and demands.

It is the view of the AFL–CIO that if the States, the localities and the Federal Government are to fulfill their responsibilities, Federal civilian service programs must be improved and extended, not destroyed.

American labor would willingly sacrifice civilian welfare services if, indeed, the needs of national security actually demanded it. Short of actual war, however, America's resources are so great—if we but fully used them—that we can build up our national defense and raise civilian public services too.

We will work tirelessly to see that this necessity is not ignored.

WATER POLLUTION CONTROL PROGRAMS

Senator HILL. The next witness will be Mr. Daniel A. Poole, representing the Wildlife Management Institute.

You may proceed in your own way, Mr. Poole.

WILDLIFE MANAGEMENT INSTITUTE, WASHINGTON, D. C.

STATEMENT OF DANIEL A. POOLE, REPRESENTATIVE

CONSERVATIONISTS SUPPORT POLLUTION CONTROL

Mr. POOLE. Thank you, Mr. Chairman.

I am Daniel A. Poole, editor of the Outdoor News Bulletin, a news service of the Wildlife Management Institute with headquarters in Washington, D. C. The institute is a national membership organization, and its program has been dedicated to the wise management of natural resources in the public interest since 1911.

Conservationists across the Nation consider the extension and strengthening of the Water Pollution Control Act, accomplished by Public Law 660, 84th Congress, 2d session, to be one of the most significant achievements of the Congress in recent years.

The people think that the Members of Congress should be proud of this legislation and of the subsequent record in upholding and implementing the national program, particularly section 6, the grants-in-aid section of the law. There are those who would abolish section 6 and Congress has made sure that the grants funds have been appropriated each year so that the pollution abatement program would not falter.

CONSTRUCTION GRANTS PROGRAM

The salutary effect of that 18-month-old construction grants program is well known throughout the Nation. The construction work has great public appeal and it has been followed closely in the newspapers and periodicals. The people like it because they can see and benefit from the results close to home and feel a sense of participation.

During the comparatively short time that Public Law 660 has been operative there has been a one-third increase in the annual rate of sewage-treatment-plant construction over the pregrant period of 1952–56.

In the 5 years preceding 1956, new starts for treatment plants accounted for only 48 percent of the water pollution control funds expended. New starts now require 75 percent of all funds available for sewage-treatment facilities. This excellent turn of events is believed to have been brought about by communities which heretofore were unable to proceed with construction of needed facilities.

Despite this encouraging trend, the Nation still is not making much progress in overcoming the pollution problem. New construction barely is taking care of the increasing pollution loads that are being added daily, and we still have the huge backlog of sewage-treatment needs that have been permitted to build up over the years.

Between 1920 and 1955, the pollution load in the Nation's watercourses rose, on the basis of population pollution equivalent, by about 15 million persons. Pollution attributable to industry mounted to an equivalent of 60 million persons during the same period.

It has been stated that the only time—other than since the establishment of the grants program—that sewage treatment plant construction kept pace with new pollution was from 1933 to 1939 when Federal funds were available through the PWA and other programs.

GENERAL APPROVAL OF GRANTS-IN-AID

A succinct appraisal of the workability of section 6 of Public Law 660 was published in the August 19, 1957, issue of Engineering News-Record. It was the finding of Marc Leggiro, assistant editor of the periodical, that Public Law 660 is a success. The States, the municipalities, and the figures, Leggiro said, affirm that the grants have stimulated sewerage construction.

An editorial in that same issue, entitled "Grants-in-Aid Are Working" stated, in part:

> Last July, when it was signed into law, we said the Federal aid to sewage works construction "optimistically can be presumed workable." That optimism was well founded.

In Representative John A. Blatnik's original bill, which became Public Law 660, he recommended the authorization of a $100 million annual appropriation for the grants program. That was the amount that had been determined to be needed to make progress in reducing the large backlog of sewage abatement needs. Time has shown that the recommendation for a $100 million level of appropriations was realistic.

APPLICATIONS EXCEED FUNDS AVAILABLE

Applications being received by the Public Health Service for assistance in the construction of State-approved local water pollution abatement facilities exceed available moneys by about 72 percent. The lack of funds to assist municipalities construct sewage-treatment plants has enabled those who would abolish the program to create discontent by pointing to the more fortunate communities that have been given assistance.

Mr. Chairman, the rapid elimination of water pollution is necessary for the health, welfare, and security of the entire Nation, and the national conservation organizations are petitioning Congress to raise the grants program to $100 million per year.

RECOMMENDATIONS FOR STATES' ASSUMPTION OF WORK SHOCKING

The recommendation that no funds will be requested in the 1960 budget for this important work, and that the program will be handed over to the States shocked the millions of conservationists in the country. The record shows that today's water pollution headaches are the result of the States' inability to do the job. They lack adequate staffs, the depth of knowledge, initiative, and funds.

At the hearings on the Water Pollution Control Act, former Assistant Secretary of Health, Education, and Welfare Roswell B. Perkins was asked by Congressman Clifford Davis of Tennessee: "As a general statement would you say that the States are making progress in controlling pollution?"

Roswell replied: "I think we would have to, in all candor, say inadequate progress." Some State pollution-control agencies

"* * * have annual appropriations of less than $30,000 a year. In fact 23 States do."

Obviously, it is not merely a matter of vigorously opposing any attempt to scuttle the successful grants program that conservation organizations across the country are insisting that the annual appropriation be put to where it should be, to $100 million per year, double the amount now authorized.

AUTHORITY FOR RESEARCH FELLOWSHIPS

I wish to comment briefly on two additional items. The first of these is the authority contained in section 4 (a) (4) of Public Law 660 for the establishment of research fellowships in the Public Health Service with an appropriation of up to $100,000 per year. Funds have not been provided in any of the budgets to implement this much needed work.

The Institute believes that this type of research is of the utmost importance and urges the committee to add the money for the purpose of that subsection.

GROWING POLLUTION PROBLEM

We are rapidly approaching the time when everyone must be thinking beyond today's methods of water-pollution control and treatment. The present treatment methods are aimed at reducing the concentration of foreign matter that is being discharged into streams.

With the population expansion, it is imperative that the Nation soon begin to think of employing treatment methods that have pure water as an end product. Research now, aimed at solving this problem, could mean that we would be in readiness to move ahead when our national water demands reach that foreseeable stage.

In addition, we are facing new pollutants and new treatment problems each day, and these, too, should be assigned to research for study.

Some of the other phases that could be considered are the biological recovery of water following abatement of pollution, and evaluation of biological procedures for the measurement of pollution, the relationship of algae and water problems, and the effects of uranium wastes on fish and aquative life.

The Institute believes that the best assurance for solution of these problems is to start now. The information that is obtained would provide knowledge that can be drawn upon for accommodation of future needs.

Implementation of this research program, which could be accomplished by the appropriation of the $100,000 that has been authorized, also means that we would be training men in important scientific fields. It is on such scientists, and the knowledge they possess, of course, that much of the future welfare of our Nation depends.

REGIONAL PROGRAM NEEDED

A specific regional program in which the assistance of the Public Health Service is needed, Mr. Chairman, is in the completion of the water quality conservation study in the Arkansas-Red-White River Basins.

It is estimated that $400,000 is required to enable the Service to complete the cooperative study of the pollution which is causing degradation of surface waters in that area. The information that is obtained will permit Federal, State, and local agencies to plan for water development in those river basins that will be assured of water of a high degree of usability.

In fact, Mr. Chairman, the Army Corps of Engineers has a multimillion-dollar development program planned in those river basins. The information that is sought in the water quality conservation study is needed promptly.

The principal pollutant is natural and man-made brines, and unless these sources are charted and corrected, no amount of physical development for water resources will guarantee the quality of water that is required for human industrial agricultural, and other uses.

We hope that the committee will provide the necessary funds to complete that study.

Senator HILL. We appreciate your testimony very much. You have certainly given us a very informative statement.

Mr. POOLE. Thank you, Mr. Chairman.

Senator HILL. Mr. Callison, I am sorry you have had to be so patient.

NATIONAL WILD LIFE FEDERATION, WASHINGTON, D. C.

STATEMENT OF CHARLES H. CALLISON, CONSERVATION DIRECTOR

NATIONAL RESOURCES MANAGEMENT

Mr. CALLISON. I appreciate your situation.

Senator HILL. You appreciate what the situation is, sir.

Mr. CALLISON. You are long-suffering in hearing out this long list of witnesses. I know it is a tremendous undertaking and a chore and a great service that is performed by you and the other members of the subcommittee.

My name is Charles H. Callison. I am conservation director of the National Wildlife Federation, which, as you know, is a nonprofit citizens' organization made up of State wildlife federations and sportsmen's leagues in the various States and in Alaska and the District of Columbia, including, Mr. Chairman, the very fine Alabama Wildlife Federation in your State.

Senator HILL. Some of our very best citizens are in your association, I must say.

Mr. CALLISON. It is a good organization.

Because of the lateness of the hour I should like to briefly summarize my statement.

Senator HILL. We will place your statement in the record in full.

Mr. CALLISON. I would like to request that my full statement appear in the record.

Senator HILL. Your full statement will go in the record.

SUPPORT OF POLLUTION PROGRAM

Mr. CALLISON. The National Wildlife Federation with the unanimous backing of its State affiliates supported the adoption of Public Law 660 by the 84th Congress. At that time we called it a great

victory for conservation and the outstanding accomplishment of the 84th Congress in the field of natural-resources management.

We believe that the results obtained under that law, under the water-pollution program, under the Public Health Service has vindicate our position, our effort in behalf of the enactment.

We wish to express our thanks and appreciation to you, Senator Hill, and your subcommittee for approving the appropriations necessary to get the program successfully underway, first for fiscal 1957 and again for the current fiscal year, 1958.

In behalf of our federations and our State affiliates and their thousands of local conservation clubs, I appear respectfully to request and urge the full appropriations authorized by Public Law 660 for the sewage treatment construction grants program, for grants to States and interstate agencies, for other parts of the program, and for the necessary administrative costs.

We included in our statement, Mr. Chairman, some figures which we believe show conclusively that the authorizations for the construction program of Public Law 660 should by all means be doubled. Legislation has been introduced in the House and Senate to accomplish that program. If it is done we believe that we can meet this problem of sewage pollution in this country in a 10-year period. That is the objective that we think would greatly benefit the whole Nation economically and in other ways.

FUNDS FOR ARKANSAS-RED-RIVER STUDY

There are two additions to the budget estimates, proposals for the water pollution control program, that we would like to recommend. We hope an additional $400,000 will be appropriated to the Public Health Service for the purpose of completing a water-quality study on the Arkansas and Red Rivers and their tributaries which drain portions of Arkansas, Missouri, Kansas, Oklahoma, New Mexico, Texas, and Colorado.

These streams have a particular problem in salinity for which a solution is urgently needed in the public interest, and preliminary studies have already been made. We understand an estimated $400,000 would be needed to complete this final work.

FUNDS FOR RESEARCH

There is one other part of Public Law 660 that has not been implemented by appropriations. This is section 4 (a) (4) authorizing the Surgeon General to, and I quote:

> Establish and maintain research fellowships in the Public Health Service with such stipends and allowances, including traveling and subsistence expenses, as he may deem necessary to procure the assistance of the most promising research fellowships; provided, that the total sum authorized to be appropriated for any fiscal year for fellowships pursuant to the subparagraph shall not exceed $100,000.

PROBLEMS FOR RESEARCH

There are many critical problems calling urgently for the kind of research authorized here. May we suggest a few examples of the problems which, in the national interest, need early investigation:

One, the effects of chemical pesticides on fish and aquatic life.

Two, the relationship of water pollution and fish diseases.

Three, devices and measures to protect fishes and other aquatic life from toxic wastes.

Four, evaluation of recreational opportunities made useless and lost as a result of water pollution; evaluation of pollution on real-estate values.

Five, effect of sediment loads and turbidity upon aquatic life.

Six, effects of wastes from uranium-ore processing upon fish and other aquatic life.

Seven, biological recovery of waters following abatement of pollution; how such recovery may be improved and speeded up.

Eight, relationship of algae to water problems.

It has been estimated that from 20 to 25 fellowships annually could be provided from $100,000 authorized by section 4 (a) (4).

We respectfully request and urge that this subcommittee, Mr. Chairman, add the $100,000 to the appropriations under Public Law 660 in order to get these important research studies underway. We do not recommend this money be provided simply by earmarking a portion of the other appropriations all of which we think are critically needed.

We request a new and additional authorization for the research fellowships.

Since the rest of my statement will appear in the record I want to thank you for the privilege of appearing before you and stating our views, Mr. Chairman.

Senator HILL. We appreciate your presence here.

Again I will say I am sorry you had to wait so long.

(The statement referred to follows:)

STATEMENT BY CHARLES H. CALLISON, CONSERVATION DIRECTOR

The National Wildlife Federation is a nonprofit, citizens' organization made up of State wildlife federations and sportsmen's leagues in the various States, Alaska, Hawaii, and the District of Columbia. The combined memberships of these State affiliates, adding up to more than 2 million, make the Federation the Nation's largest conservation organization.

Mr. Chairman, the federation, with the unanimous backing of its State affiliates, supported the adoption of Public Law 660 by the 84th Congress. At the time we called it a great victory for conservation and the outstanding accomplishment of the 84th Congress in the field of natural-resources management. The results since obtained under the law have not changed our opinion.

We wish to express our thanks and appreciation to this subcommittee for approving the appropriations necessary to get the program successfully underway, first for fiscal year 1957 and again last year for the current fiscal year (1958).

In behalf of the National Wildlife Federation, its State affiliates, and their thousands of local conservation clubs, I appear respectfully to request and urge the full appropriations authorized by Public Law 660 for the sewage-treatment construction grants program, for grants to States and interstate agencies, for other parts of the program, and for the necessary administrative costs.

We recommend appropriation of the full $50 million for sewage-treatment construction grants, instead of the $45 million proposed in the President's budget. The backlog of grant applications, plus additional applications known to be in the process of preparation and clearance in the States and regional offices, make it quite clear that the full $50 million authorized in section 6 of Public Law 660 can be efficiently utilized.

In the 17 months since the construction grants program actually got started in December 1956, until the end of April 1958, a total of $82,907,353 was approved in grants for 994 projects. Total construction cost of these 994 projects is figured at $390,774,000. But as of April 30, 1958, there were applications on local drawing boards or being processed in State and regional offices for other grants aggregating $93,065,000, to assist in the construction of some 968 other installations estimated to cost a total of about $711 million.

These figures clearly show, Mr. Chairman, that although new municipal sewage-treatment plants are now being initiated and constructed at the fastest rate in our national history, the stimulation brought about by Public Law 660 is just beginning to make itself felt.

The stimulation has been all the more remarkable and encouraging in view of the fact that the municipal bond market in 1957 was the worst since 1935. It is quite evident that hundreds of smaller cities could not have financed new sewage-treatment facilities, and would not have started them, without the aid and incentive of the Federal grants.

The facts indicate that an annual program of $100 million in Federal grants would be more realistic and more in line with national pollution-control needs than the $50 million authorized in Public Law 660. You will recall that, as originally introduced, this legislation proposed $100 million in Federal incentive grants annually up to a total of $1 billion over a period of years. We hope the law will soon be changed to make it more realistic and to provide a program sufficient to clean up all our polluted streams during the next decade.

The federation also hopes an additional $400,000 will be appropriated to the Public Health Service for the purpose of completing a water quality study on the Arkansas and Red Rivers and their tributaries, which drain portions of Arkansas, Missouri, Kansas, Oklahoma, New Mexico, Texas, and Colorado. These streams have a particular problem in salinity for which a solution is urgently needed in the public interest and preliminary studies already have been made. We understand an estimated $400,000 would be needed to complete this vital work.

Mr. Chairman, one important part of Public Law 600 has not been implemented by appropriations. This is section 4 (a) (4) authorizing the Surgeon General to "establish and maintain research fellowships in the Public Health Service with such stipends and allowances, including traveling and subsistence expenses, as he may deem necessary to procure the assistance of the most promising research fellowships: *Provided*, That the total sum authorized to be appropriated for any fiscal year for fellowships pursuant to this subparagraph shall not exceed $100,000; * * *"

There are many critical problems calling urgently for the kind of research authorized here. May we suggest a few examples of the problems which, in the national interest, need early investigation:

(1) The effects of pesticides on fish and aquatic life.

(2) The relationship of water pollution and fish diseases.

(3) Devices and measures to protect fishes and other aquatic life from toxic wastes.

(4) Evaluation of recreational opportunities made useless and lost as a result of water pollution; evaluation of pollution on real-estate values.

(5) Effects of sediment loads and turbidity upon aquatic life.

(6) Effects of wastes from uranium-ore processing upon fish and other aquatic life.

(7) Biological recovery of waters following abatement of pollution; how such recovery may be improved and speeded up.

(8) Relationship of algae to water problems.

It has been estimated that from 20 to 25 fellowships annually could be provided from the $100,000 authorized by section 4 (a) (4). Mr. Chairman, we respectfully request and urge this subcommittee to add $100,000 to the appropriations under Public Law 660 in order to get these important research studies underway. We do not recommend this money be provided simply by earmarking a portion of the other appropriations, as none of the other functions are overfinanced. We request new and additional money for research fellowships.

Returning now to the question of sewage-treatment construction grants, Mr. Chairman, the interesting theory has been advanced by the so-called Joint Federal-State Action Committee that if the Federal Government discontinues this program, the States will step in and provide financial aids to take up the slack.

It is an interesting theory, but we know from bitter experience it will not work. A few State legislatures might act promptly to carry on the program without interruption, but delays up to 10 years and longer would inevitably occur in most States. Meantime, we would once again be falling further and further behind in the pollution-control problem.

For one thing, we know from long and recent experience that the same groups that are now doing their best to kill the Federal-grants program, would be on hand in the lobbies of the State legislatures to oppose stronger State laws, and to block adequate appropriations. These are the groups that have a vested interest in polluted streams. They are the same groups that sparked the unsuccessful

attempt on the floor of the House last year to knock out 1958 appropriations for the construction-grants program.

The theory that the Federal Government has no responsibility for water-pollution control also is utterly without validity. So many major streams and watersheds, so many metropolitan areas are interstate in character. It is only through Federal action, in cooperation with State and local agencies, that the toughest pollution problems can be overcome. The knotty problem of the Potomac, right here on the doorstep of the Federal Government, is a case in point.

If it is valid to argue that spending Federal funds to help clean up municipal sewage is a misuse of Federal tax dollars, it is equally valid to argue that all flood-control works should be paid for by the local beneficiaries and by the landowners on whose lands the floodwaters originate. It is possible to calculate with reasonable accuracy the proportion of overflow waters that are contributed to a stream system as a result of land misuse by farmers and ranchers in a watershed. Do we try to argue that the farmers who own and operate the watershed lands should pay for flood-control works downstream? As a matter of fact, the Federal Government contributes from its general revenues through several programs to help the farmers install soil-conservation and water-control measures and to protect the watersheds from excessive runoff. All the taxpayers of the Nation contribute to the cost of main stream flood control.

There is just as much reason, based on broad public benefits and the interlocking community of national interest, behind Federal grants to stimulate the construction of sewage-treatment works for pollution abatement.

Mr. Chairman, the contamination of the public waters of America by dumping untreated sewage and industrial wastes into them is nothing more than the literal, physical destruction of natural resources. What happens when a stream is befouled and poisoned by pollution?

Its waters cannot be used for household purposes except after costly treatment.

Industries requiring clean water for their processes have to seek plant sites elsewhere. This adds to the cost of commodity production, depresses the polluted community.

The waters cannot be safely used for swimming, boating, water skiing, or other forms of aquatic recreation. Parks and playgrounds along the shorelines must be posted with warning signs.

Farmers cannot use the stream to irrigate their fields or water their livestock.

Fish die in these waters. Waterfowl and other wildlife shun them.

Real-estate values decline along the polluted river, because no one wants to live above the stench of an open sewer.

All this, gentlemen, is sheer waste. It is worse than waste; it is needless destruction of natural resources that this Nation can no longer afford.

In conclusion, Mr. Chairman, we wish to reemphasize that the problem of water pollution in this Nation demands action, not theory.

We are getting action at last under Public Law 660. The conservationists of this country will oppose, and will fight with all the resources at their command, any attempt to scuttle, or to weaken, any part of the Federal program.

At the same time, they will continue to work, with all the resources at their command, for stronger State laws and more adequate State appropriations for pollution control and abatement. They will throw their organized strength behind municipal bonding issues and other local actions to clean up the polluted waters.

I make the above predictions, Mr. Chairman, as statements of fact. This is one issue on which conservationists have no doubts. On this issue we know how we stand. For the immediate economy and public welfare, and for the long-range security of America, water pollution must be cleaned up.

Senator HILL. Mr. Nadel, we are glad to have you here, sir.

THE WILDERNESS SOCIETY

STATEMENT OF MICHAEL NADEL, ASSISTANT EXECUTIVE SECRETARY

SUPPORT FOR PUBLIC LAW 660

Senator HILL. I will say to you what I said to Mr. Callison, I am sorry that you had to be so patient and so long suffering.

Mr. NADEL. Sir, it is a privilege to appear before a committee chairman of your patience and understanding.

Senator HILL. Thank you.

Mr. NADEL. My name is Michael Nadel. I am assistant executive secretary of the Wilderness Society, a national nonprofit citizen's conservation organization, with headquarters at 2144 P Street NW., Washington, D. C. The society was founded in 1935. It has a paid membership of some 11,000 and every State in the Union is represented, as well as the Territories of Alaska and Hawaii, and foreign countries.

Mr. Chairman, the executive secretary of the Wilderness Society and editor of the Living Wilderness, Mr. Howard Zahniser, would have been here to testify today, but having lately returned from a public hearing in Pinedale, Wyo., in connection with reclassification of the Bridger primitive area as a wilderness area, he did not have advance knowledge of today's hearing before your committee. Therefore, I should like to present a brief statement somewhat identical to that which Mr. Zahniser submitted on February 25, 1958, to the House Subcommittee on Labor and Health, Education, and Welfare, on H. R. 11645.

We supported vigorously the adoption of Public Law 660 by the 84th Congress, and we have an earnest concern that this law be implemented as an instrument for the public welfare through adequate appropriations to carry out its provisions. Accordingly we are most grateful for this opportunity to commend to your consideration an appropriation of the full $50 million permissible under the law. The House allowed $45 million.

NEED FOR FULL APPROPRIATION

The urgent need for the full appropriation of $50 million, rather than $45 million as set down in the President's budget has been or is being expressed to you in forceful detail by spokesmen for the National Wildlife Federation and the Wildlife Management Institute with whom we have conferred in preparation for this occasion.

These and other conservation spokesmen will emphasize the initial progress of the construction grants program, the many applications now on local boards or being processed. They will underline the need to implement the provisions of Public Law 660 for research, technical assistance, and training, for which no appropriations have been made; and they will illustrate many of the critical problems for which research is urgently needed.

VALUE OF POLLUTION CONTROL DEMONSTRATED

They will emphasize that the water pollution control program as enacted under Public Law 660 has already proved so demonstrably valuable for the people of the whole Nation that an annual program for $100 million in Federal grants would be more nearly in line with urgent needs. They will declare their support for a measure that will provide such a program, as originally proposed by Congressman John Blatnick.

These views the Wilderness Society firmly endorses and supports. The Wilderness Society believes that it is not only appropriate, but necessary, to provide Federal assistance in order to insure adequate programs by municipalities of the Nation for the abatement and control of this most blatant evil which spreads plaguelike from municipality to municipality, and across State lines.

At the present time, through lack of adequate funds, the situation is worsening, even though progress has been made in some areas with Federal help. That help needs to be made realistic, in order to overcome the accumulation of past and present evils.

We hope, therefore, Mr. Chairman, that your committee will recommend the full appropriation of $50 million as the very minimum to face our very critical needs.

Senator HILL. The program has certainly worked out well, has it not?

Mr. NADEL. Yes, it has, well indeed.

Senator HILL. We certainly want to thank you for being here and giving your support to this program, giving our committee the help which you have brought us today. We appreciate it very much.

Mr. NADEL. Thank you very much for the privilege of appearing.

Mr. CALLISON. Sir, I think someone should comment on the patience of the reporter.

Senator HILL. I agree with you, sir. I join wholeheartedly with you, sir, in paying tribute to the young lady. She is most patient and she has a most responsible, imposing task, I would say. It is a hard job. We appreciate it very, very much. We certainly do.

The committee will now stand in recess until 10 a. m. tomorrow morning.

(Thereupon, at 12:30 p. m., Tuesday, May 13, 1958, the subcommittee adjourned, to reconvene at 10 a. m., Wednesday, May 14, 1958.)

LABOR—HEALTH, EDUCATION, AND WELFARE APPROPRIATIONS, 1959

WEDNESDAY, MAY 14, 1958

United States Senate,
Subcommittee of the Committee on Appropriations,
Washington, D. C.

The subcommittee met at 10 a. m., pursuant to recess in room F–82, the Capitol, Hon. Lister Hill (chairman of the subcommittee) presiding

Present: Senators Hill and Stennis.

HEALTH, EDUCATION, AND WELFARE

Dental Research

American Dental Association

STATEMENTS OF DR. FLOYD W. PILLARS, OF DES MOINES, IOWA, VICE CHAIRMAN OF THE COUNCIL ON LEGISLATION; DR. THOMAS J. HILL, OF CLEVELAND, OHIO, CHAIRMAN OF THE COUNCIL ON DENTAL RESEARCH; BERNARD J. CONWAY, SECRETARY, COUNCIL ON LEGISLATION; AND DR. J. F. VOLKER, DEAN, SCHOOL OF DENTISTRY, THE UNIVERSITY OF ALABAMA, BIRMINGHAM, ALA.

CONSTRUCTION FUNDS FOR NATIONAL INSTITUTE OF DENTAL RESEARCH

Senator Hill. The subcommittee will kindly come to order.

First, I suppose we might take all of the dental witnesses. Who is going to speak first for this group?

Dr. Pillars. I am Dr. Floyd W. Pillars, from Des Moines, Iowa. I am the vice chairman of the council on legislation of the American Dental Association. With me is Dr. Thomas Hill of Cleveland, Ohio, who is the chairman of the council on dental research for the American Dental Association, and also with me is Mr. Bernard J. Conway, from Chicago, who is the secretary of the council on legislation of our association, and I would also like to indicate that Dr. C. Willard Camalier, past president of the American Dental Association is also in the room with us.

Senator Hill. I might say that Dr. Camalier and Mr. Conway are old friends of this committee, and we are delighted that you gentlemen saw fit to bring them with you.

Mr. Pillars. I also want to introduce, of course, Dean Volker, of the School of Dentistry of the University of Alabama.

Senator Hill. All right, Dr. Pillars, you may proceed as you see fit.

Dr. PILLARS. Mr. Chairman and members of the committee. I am here today to present the association's recommendation on the need for construction funds for the National Institute of Dental Research.

PREPARED STATEMENT

In an effort to save your time and to allow more time for Dr. Hill, I would like to ask, Mr. Chairman, if the statement may be presented for the record?

Senator HILL. We will have that statement appear in full in the record at this point.

(The statement referred to follows:)

STATEMENT OF THE AMERICAN DENTAL ASSOCIATION

Mr. Chairman and members of the committee, I am Dr. Floyd W. Pillars, of Des Moines, Iowa, vice chairman of the council on legislation of the American Dental Association. With me is Dr. Thomas J. Hill of Cleveland, Ohio, chairman of the association's council on dental research and Mr. Bernard J. Conway of Chicago, Ill., secretary of the association's council on legislation. I am here today to present the association's recommendations on the need for construction funds for the National Institute of Dental Research. Dr. Hill will portray some of the significant advances in dental research and will demonstrate the critical need for increasing the funds for the grant program administered by the Dental Institute to support research in the dental schools and other dental research centers.

RECOMMENDATIONS

The American Dental Association urges this committee and the Senate:

1. To support the $3,700,000 appropriation contained in H. R. 11645 for constructing and equipping the National Institute of Dental Research building.

2. To increase the fiscal 1959 funds for project grants administered by the Dental Institute from $2,825,000 to $3,825,000.

Dr. Hill's testimony will treat the project grant program in detail. I shall devote my comments to the Dental Institute building appropriation.

BRIEF HISTORY OF THE BUILDING LEGISLATION

This occasion marks the passing of a decade since the American Dental Association successfully petitioned Congress to enact legislation authorizing construction of a building to house the National Institute of Dental Research.

During that period, the need for the building has been demonstrated and documented over and over again.

In 1948, as the members of this committee know, Congress, with the approval of the President, determined that the building was desirable and necessary. Since then—save for a period during the Korean emergency—this committee, its counterpart in the House of Representatives, other congressional committees and the American Dental Association have gone on record strongly favoring immediate construction. The Public Health Service also is on record in support of the urgent need for the building. In 1956, Congress passed and President Eisenhower signed legislation authorizing additional construction funds for the dental research building (public Law 732, 84th Cong.).

CRITICAL NEED FOR NIDR BUILDING

In order effectively to carry out its mandate from Congress to conduct investigations in basic and clinical research, the National Institute of Dental Research must have the 35,000 square feet of working space to be provided in the proposed building. Less than 10,000 square feet are now available to the dental scientists. In terms of individual space requirements, the recognized minimal standard is 150 square feet for each principal investigator. The allowance at the present location of the National Institute of Dental Research is about 112 square feet. In the last year, there has been a decrease in available space of 13 square feet per investigator.

The inadequacy of space and facilities is undoubtedly having an effect upon the morale of personnel at the Institute. We understand that increasing difficulty is being encountered in retaining skilled people. Several highly qualified em-

ployees left the Institute during the last 2 years. We have informed that the majority of there principal investigators did so primarily because of disatisfaction with facilities and, more importantly, because of the Institute's inability to provide space for an adequate staff of technicians to assist the scientists. In time of acute shortages of skilled scientific investigators, we consider this to be a deplorable state of affairs. It is certainly inconsistent with the avowed policy of the Government of encouraging basic scientific endeavor.

Because of the shortage of physical facilities, critically needed investigations have been deferred; others have been curtailed. Those which have been carried on have been hampered by the overcrowded and inconvenient physical layout of present facilities. Certainly, there is ample justification for the conclusion reached by the Senate Committee on Labor and Public Welfare that, "* * * lack of proper facilities for the Dental Institute's program poses a serious threat to this Nation's progress toward effective control and prevention of dental disease."

In the past, failure to go ahead with construction has been defended on the grounds of economy and inflation. In view of available information, however, both of these arguments are of extremely doubtful validity. The Senate Committee on Labor and Public Welfare concluded, and we are in accord, that "Failure to initiate the construction of the Dental Institute building at the time Congress authorized the project has proved a most costly postponement."

Because of rising costs, at least $2 million have been added to construction cost. Originally, the building could have been constructed with half the funds now required. Additionally, substantial amounts have been spent during recent years to rent space for some essential activities of the National Institutes of Health. The National Institute of Dental Research, itself, currently is renting space in Silver Spring. At least one other Institute is forced to rent outside quarters because of the unavailability of the space now occupied and used for dental research operations. We fail to understand how economy is being served by the prolongation of this situation.

The American Dental Association is not unmindful of the tremendous expenditures which must be made in the interests of national security. At the same time, it is felt that certain critical health needs should not continue to be ignored. Actually, the health and well-being of our citizens have a direct relation to national security. Considering the dimensions of the dental health problem, discoveries which may be in the offing in research conceivably would improve the health of millions of people and thus contribute substantially to our total preparedness effort.

The dental profession has increasing difficulty in coping with the dental health problem. It is too big. Ninety-five percent of the population is afflicted with dental disease; population increase, furthermore, will continue to be proportionately greater than the increase in dentists.

This Nation simply cannot afford to continue to attempt to meet the problem by the endless treatment of the disease after it occurs. Such an approach is costly and largely ineffective. This is illustrated by the fact that over a billion and a half dollars are being spent each year for dental care, yet only about 40 percent of the people are receiving adequate treatment. The only answer to the problem lies in research. Only through research will there be found the means of prevention and early control of dental disease.

The American Dental Association is acutely conscious of the need for large expenditures for national defense. However, it is believed that consideration also should be given to expenditures for facilities, such as the dental research building, which have a direct relation to the protection of the public health and for which a truly critical need exists. In relation to the proposed multibillion-dollar budget, which includes large amounts for nondefense as well as defense items, the $4 million required for the dental research building seems a small price for the benefits which would result.

The American Dental Association urges that this committee and the Senate approve the $3,700,000 appropriation within H. R. 11645 for constructing and equipping a building to house the activities of the National Institute of Dental Research. At this time I should like to introduce Dr. Thomas J. Hill.

General Statement

Dr. Pillars. I will attempt to summarize, very briefly, my testimony.

As you know, some 6 weeks ago, the House of Representatives approved an appropriation of $3,700,000 for constructing and equipping the National Institute of Dental Research Building and it is

my purpose here today to ask the support of the Senate and of this committee for this appropriation.

I do not wish to take your time to point out the vital need for this building. It is found in our testimony. I simply want to indicate that our association thinks that this is vitally important, this expanded facility for dental research.

PROBLEMS OF DENTAL HEALTH

The dental profession has had increasing difficulty in coping with the dental-health problem. We feel it is just too big for us because over 95 percent of the population is afflicted with dental disease. Population increases, furthermore, will continue to be proportionately greater than the increase in dentists. This Nation simply cannot afford to continue to attempt to meet the problems by the treatment of disease after it occurs. Such an approach is costly and largely ineffective.

This is illustrated by the fact that over $1,500 million is spent each year by the American public for dental care, yet only about 40 percent of the population received adequate treatment. We feel that the only answer to this problem lies in dental research and only through research will there be found a means to prevention and the early control of dental disease.

So I would like to, on behalf of the American Dental Association, urge this committee, and the Senate, to appropriate the $3,700,000 in H. R. 11645 for the construction and equipping of a building to house the activities of the National Institute of Dental Research.

ADVANCES IN DENTAL RESEARCH

I thank you for giving me this opportunity to present the association's views, and I would like to reintroduce to you Dr. Thomas Hill who will portray some of the significant advances in dental research and will demonstrate the critical need for increasing the funds for the grant program administrated by the Dental Institute to support research in the dental schools and other dental facilities.

Senator HILL. Dr. Hill, we will be happy to hear from you.

Dr. HILL. Mr. Chairman, I am Dr. Thomas J. Hill, of Cleveland, Ohio. I am professor emeritus of oral pathology at Western Reserve University and I am president of the American College of Dentists, and I am also, at present, a consultant to the National Institute of Dental Research.

I am appearing here now as chairman of the council on dental research of the American Dental Association, to ask that you give consideration to their request for an increase in the appropriation for research funds.

I should like to present a formal statement and I would like very briefly to discuss some of the things that are in that statement.

Senator HILL. We will have your formal statement appear in full in the record, and you may proceed in your own way.

(The statement referred to follows:)

STATEMENT OF THE AMERICAN DENTAL ASSOCIATION

Mr. Chairman and members of the committee, I am Dr. Thomas J. Hill, of Cleveland, Ohio. I am professor emeritus of oral pathology at Western Reserve

University and I am president of the American College of Dentists. I am also chairman of the American Dental Association's Council on Dental Research.

I am here today to present the American Dental Association's views and recommendations concerning fiscal 1959 appropriations for the dental health activities of the Public Health Service.

THE PROJECT GRANTS PROGRAM OF THE NIDR

Recommendation

The American Dental Association recommends that the appropriation recommended in H. R. 11645 for dental health activities of the Public Health Service be raised from $6,543,000 to $7,293,000, an increase of $750,000. This would represent an increase of $1 million over the $6,293,000 proposed in the President's budget and an increase of $863,000 over the fiscal 1958 appropriation. The increase recommended by the association would provide an additional $1 million to be used to further the project grants program of the National Institute of Dental Research. In terms of the President's budget estimate, this would increase the amount available for project grants from $2,825,000 to $3,825,000. This modest advancement in funds for the project grants program would be in keeping with a policy recommendation of the association's house of delegates adopted in 1957, a copy of which is appended to this statement.

The association takes no position with respect to the request that the Institutes of Health be permitted to allocate increased amounts of money for overhead costs. However, if the Congress decides to permit increased allowances for this purpose, the association believes that appropriations should be increased equivalently.

Project grant program

The American Dental Association again wishes to express its appreciation and to commend the members of this subcommittee for their continued support of the dental research program at the National Institutes of Health. As recently as 10 years ago Federal support of dental research was practically nonexistent. Up to that time, despite the fact that dental disease is the Nation's most prevalent disease—afflicting 95 percent of the population—there was no coordinated plan under which personnel and facilities could be marshaled for an investigation into the causes of dental disease.

This subcommittee can take pride in the fact that such a program is now a reality and that investigators from all parts of this country are now making an intensive search into the nature of oral diseases and their relation to the general health of our people. This expansion occurred chiefly as a result of the appropriations recommended by this committee in 1956 for grants to the dental schools and other dental research centers.

The 45 dental schools and a number of other dental research institutions responded with such vigor and enthusiasm that today over 90 percent of the dental schools have undertaken projects which are contributing immeasurably to an understanding of the myriad problems connected with dental disease.

In 1955, before the increase in funds was made available only 50 percent of the dental schools had active programs of dental research. Since then, the number of grantees conducting research supported by Federal funds has increased sixfold.

It must be recognized, however, that this program is yet in the beginning stages. In terms of the research capacity of this Nation, the potential in the area of oral disease investigation has only been touched. The American Dental Association believes that much more needs to be done; for example, with available personnel and facilities, the dental schools are in a position to carry on at least a hundred projects in addition to those being conducted and those to be activtated this year.

The growth of research in the dental schools, moreover, is essential to a continuing improvement in the standards of dental education.

Increased Federal support of research projects is responsible in large part for a significant improvement in the quality of the training now provided to dental students. As you are well aware, research is a prime characteristic and necessary discipline, of all higher education. It is especially important in health sciences such as dentistry. As a result of the Dental Institute's grants program, the majority of our dental schools has been able to make much needed improvement in their research training activities. By encouraging increased participation in both basic and applied research by faculty members, as well as students, the National Institute of Dental Research has made a commendable contribution to our entire dental educational system.

The benefits to be derived from a complete clinical and laboratory research program conducted as a part of the dental school regimen is invaluable. Such a program is the means of arming each new dentist with a broad understanding of the nature and underlying causes of diseases of the human body and the most modern advances in prevention and treatment.

The emphasis in dental schools of course, is upon oral diseases. But, through his experience in research, particularly during his basic science courses, a newly graduated dentist also has a deep knowledge of the relationship of oral diseases to general systemic disorders. Thus trained, the dentist becomes a special bulwark in the fight against not only oral diseases but many other human ills as well.

I can briefly illustrate the importance of this phase of dental training by pointing out its application to specific diseases.

To appreciate the significance of oral diagnosis, one should be cognizant of the fact that there are thousands of people who each year visit their dentists but do not visit their physicians. Some of these people may be suffering from diseases which are other than dental in character but are manifested in the mouth. This is true, for example, of diabetes. Many systemic diseases have early reflections in the oral mucosa and the alveolar bone. Through the research and training programs the schools are developing diagnostic programs in which the routine examinations greatly aid in the early detection of such diseases.

Likewise, in the case of cancer, several grant projects are directed toward the development of new diagnostic techniques. As you know, the only known effective treatment for cancer is early detection followed by surgical or radiological therapy. The possibilities of saving additional lives will be increased manyfold by the routine application of improved procedures for cancer diagnosis in the daily practice of dentistry.

These are but a few of the advances which are directly related to the project grants program. There are many more. Attached to this statement are descriptions of research activities which should be greatly expanded.

The need for gradual but constant increases

In the judgment of the association's council on dental research, the modest increase recommended by the association will permit a carefully considered and desirable expansion of the Dental Institute's grants program which will enable the Institute to take prudent advantage of presently available manpower and facilities. In terms of physical facilities and trained personnel, available resources are more than adequate to accommodate the expansion we are advocating. The dental schools and other research institutions have the capacity and are eager to undertake investigations in many vital but virtually untouched areas of dental health.

The information to support this view has been obtained by the council on dental education, the council on dental research and other agencies of the American Dental Association which are continuously in touch with the dental schools and other institutions where a large part of dental research is in progress. This information has been supplemented with grant records as published by the NIH or as obtained from the National Institute of Dental Research.

Parenthetically it should be noted that the calculations here presented are based upon information relating to approved applications which have survived a thorough evaluation and screening process and have been found to be deserving of support. On an average, only about 40 percent of the applications are approved by the Institute's Study Section and Advisory Council for recommendation for support.

With a view to fiscal 1959, a careful study of experience and data compiled by the American Dental Association indicates that the situation will be very acute unless the budget is increased as proposed by the association. This arises in large part from the fact that ordinarily it is necessary to consider proposed research projects in terms of 3 to 5 year's duration. Very few worthwhile investigations can be completed in the space of 1 or 2 years.

Please bear in mind also that a large fraction of the grants to support presently active projects were made in fiscal 1957 or fiscal 1958 owing to lack of adequate funds in preceding years. Thus it is obvious that a very large proportion of the fiscal 1959 funds for extramural projects would be required merely to continue the investigations which are now in progress. From available data, it is conservatively estimated that about $2,500,000 of the $2,825,000 proposed for project grants will be required in fiscal 1959 for continuation of existing research. That would leave no more that $300,000 to $400,000 available to activate important new studies throughout the entire year. The inadequacy of that amount is

emphasized by the fact that before the end of the present fiscal year some 75 to 85 projects, representing a need for about $800,000 will have been approved by the dental advisory council but not paid because of lack of funds. In other words, the backlog of approved grants carried over into fiscal 1959 would be $400,000 to $500,000 greater than the available funds even before considering applications approved throughout that year. Practically, it means that if funds are kept at the 1958 level, the program will not only not progress during 1959 but a large amount of effort and careful planning in fiscal 1958 will have been wasted.

Using experience as a guide, if 1959 expenditures are held to the 1958 level, one can readily see that it will be necessary in 1960 to ask for a large jump in appropriations for research projects. In the meantime, there will be waste and inefficiency caused by inability to make adequate plans and failure to use and retain personnel and facilities as they are available. The association believes that this "jump—level-off" approach is undesirable and works unnecessary hardships on everyone concerned. It would be preferable to make year-to-year increases of the amounts which are necessary to insure a steady progression.

In this connection, another important fact should be considered. Through the fellowship and training grant programs, the schools are now turning out a number of highly skilled research investigators. If we are to take full advantage of this newly acquired and valuable reservoir of scientists, we cannot have a break of a year or so during which the initiation of new projects is sharply curtailed. If that occurs, many of these people will be lost permanently to the dental research effort. This should not be allowed to happen. It can be avoided by a reasonable expansion of support for the Dental Institute's grants program.

To sum up, based upon the amount of commitments for research projects currently underway, the number of worthy projects which have been approved but not activated for lack of funds, and a reliable estimate of the number of applications for deserving projects which will be submitted in fiscal 1959, the American Dental Association believes that an increase of $1 million over the amount expended last year for the Dental Institute project grants program is necessary to keep the total research effort at a reasonably sound rate of progression.

I assure the committee that if this recommendation for an increase in funds for research projects is granted, it will be money well spent. I believe you will agree that the funds heretofore invested by the Government in the dental research program are paying and will continue to pay rich dividends.

In behalf of the American Dental Association, I thank the committee for the opportunity of presenting this testimony.

Appendix I. Policy of American Dental Association on Fiscal 1959 Appropriations for NIDR Research Grants

Whereas the expansion of sound dental research during the past years bears out the American Dental Association's estimation of the research capacity of the Nation, and suggests that the potential in this area of invistigation has only been touched; and

Whereas more and more dental students, and recently graduated dentists, are considering the advantages of a career in research and teaching; and

Whereas it is now time to recognize the essentiality of implementing a long-range plan for research on the complex diseases and conditions of the mouth, including their relationship to systematic conditions, the increasing oral problems of an aging population and to utilize the combined and coordinated knowledge and skills of many scientific disciplines; and

Whereas because of a lack of funds it will not be possible to activate a number of approved grants and worthy applications: Therefore, be it

Resolved, That the Congress be asked to augment the present research grants program of the National Institute of Dental Research by increasing the annual appropriation $1 million for the next fiscal year.

Appendix II. Important Recent Developments in Dental Research

CHEMICAL REMINERALIZATION OF DECAYED TEETH

For many years it has been an axiom in the medical profession that certain types of neural or brain tissues do not have the capacity of repairing themselves and that once this type of tissue suffers an injury, the action is irreversible and the patient must bear the effects for the balance of his life.

For generations, a similar axiom has been accepted in the dental profession; the hard tissues of the teeth cannot repair themselves after injury and the defect can be corrected only by the manual intervention of dentists.

There is some reason to believe that defects in the substance of a tooth—dental decay—might be controlled by "remineralization" of the tooth, the restoring of the decayed or missing portion of the tooth through complex chemical and other procedures. Such procedures might never proceed to the restoration of a tooth to its white, ivorylike integrity. But it is possible to envision that dental research could develop a process under which "remineralization" might halt the decay process and permit the patient to live with some forms of dental decay in comfort and without menace to his total dental health and general health. If research could develop this to the point of usefulness, it would provide, with fluoridation, the major answers to the problem of tooth decay, a disease which attacks the population almost universally. In this one narrow but important area of dental research may lie the answer to a disease which has not been conquered even in this age of atomic progress.

Important work on this problem has been done in Scandinavia by Andresen and is now being conducted by Sognnaes at Harvard University. If this search were expanded on a crash basis, its cost would be nominal and, if successful, its results would need to be measured not only in terms of millions of dollars of savings in the cost of dental health but in an unassessable amount of millions in human health and well-being.

TOOTH BANKS

Dentistry today functions on the principle that every single tooth in the arch is important and that the primary aim of the dentist is to save the diseased tooth at all costs. Everyone who has had the misfortune to lose a tooth or to lose several teeth is well aware of the fact that there is nothing like one's own teeth. Replacement of lost teeth has developed to a fine art, but the finest restorations, the most perfect creations of present dental science, dental craft, and dental art are only substitutes for the sound natural dentition with which the more fortunate of us are blessed. For that reason, a tooth is never extracted unless all remedies fail. If the vital pulp of the tooth is diseased, it is treated with medication or by exacting surgery. If, in spite of all efforts, the pulp is lost, the pulp canal is cleaned and filled with inert material so that the tooth may be retained in the mouth to provide many more years of useful service.

If the tooth itself must be extracted, the dentist regards the situation as a battle that has been lost.

The loss of a tooth must be compensated quickly by the placement of a bridge or a partial denture to fill the gap (literally) and prevent adjacent teeth from loosening, drifting, and becoming additional casualties. This procedure has helped thousands of patients immeasurably over the years, but the substituted artificial tooth cannot serve as well as the original because it has no root of its own and must depend for support on the root structures of its adjacent neighbors.

For some years, limited experimentation has been performed with the germs or buds of unerupted teeth. Fleming at Yale, Lefkowitz at Ohio State, and others elsewhere have laid the groundwork in laboratory studies in this area. It has been possible to transplant living tooth buds from one site to another within the same animal. Elsewhere, cases are recorded of transplanting wisdom teeth to the first molar area in human subjects. It is possible that transplantation of tooth buds from one animal to another may break ground for the development ot "tooth banks" for human teeth. Blood banks, eye banks, bone banks, and other similar tissue repositories are serving amazing functions every day. The availability of a tooth bank certainly would be a boon to the unfortunate child whose front teeth are destroyed in an accident, to the youug woman whose prospects for future happiness are placed at risk, by the necessity of losing all of her hopelessly decayed anteriors, to the older individual whose upper, fixed bridgework must go because the single remaining tooth on which is depends has finally broken down under the strain.

The day when tooth banks become a reality can be hastened only by the provision of funds for expansion of research in this area.

CRIPPLING ORAL DEFORMITIES—CLEFT PALATE

The condition known as cleft palate affects thousands of American children. The incidence of the deformity is about 1 of every 750 live births.

Everyone is familiar with the tragic spectacle of a person afflicted with cleft palate; the facial disfiguration, the abnormal speech, the malocclusion of teeth,

the near inability to chew or perform any of the normal functions of the mouth, and the development of severe psychological disturbances.

For many years, science has been working to produce new surgical techniques, improved prosthetic appliances, new methods of speech therapy, and many other treatments to reduce or eliminate the debilities associated with cleft palate. Recently, through expanded research, the progress in this area has been greatly accelerated. For example, through use of a newly developed speech bulb placed in perfect position by use of cineradiographic technique, it may bring the day closer when cleft-palate patients can achieve normal articulation and voice quality. Advances which are being made in tooth-bud transplantation also may be of enormous value in restoring normal function to the mouth of the cleft-palate patient.

This extremely promising work on improved treatment for the victims of cleft palate is, of course, continuing. But even more dramatic and encouraging weapons against this affliction are on the horizon in the field of preventive research.

There are signs that we are on the threshold of discoveries which may make possible prebirth detection and prevention of cleft palate.

A large step toward this accomplishment is in progress at the dental research department at the University of North Carolina, where a strain of cleft-palate dogs is being developed. This colony of dogs will permit investigation not only of hereditary relationships in cleft palate but, also, effects of nutritional and other factors in causation and, possibly, prevention of the deformity in utero. Clinical investigations by the same investigator (Dr. R. F. Hagerty) indicate promising results in the prevention of abnormal compression of the mandible during early ossification by the use of a palatal bar to maintain normal relationship of bone. Other significant research on cleft palate is being done by Pruzansky at Illinois, Cooper at the Lancaster Pa., Cleft Palate Clinic, and elsewhere. More is needed.

PERIODONTAL DISEASE

After the age of 35, the greatest single cause of tooth loss is periodontal disease, or "pyorrhea," as it is commonly but incorrectly known. Although commendable strides have been made in the treatment of periodontal disease, relatively little fundamental progress has been possible because the basic causes of the disease do not lend themselves readily to investigation. The disease is associated with the formation of calculus, or "tartar," on the teeth, with subsequent inflammation and loss of the bony support around the tooth roots. The teeth become loose and eventually fall out. To make matters worse, the ridges that remain are so badly depleted of their bony understructure that artificial dentures often cannot be fitted properly after the teeth have been lost. Everyone knows some unfortunate individual who cannot get an upper denture to stay in place. No dentist can fabricate a stable prosthetic applicance for a jaw that provides no stable foundation. Such are the sad results of advanced periodontal disease.

Within recent years, Leung at Pittsburgh and others elsewhere have made significant progress in elucidating the manner in which calculus is formed. It is recognized that bacteria play an important part in this and later stages of the development of periodontal disease. Exactly what part they play, and how they may be attacked, is not yet known.

RESEARCH TOOLS

Three exceptionally promising research tools have come to light through diligent investigation up to now. First, periodontal lesions can be produced in animals by experimental techniques. Collings at Baylor and Wentz at Loyola in Chicago have made some of the more recent contributions in this field. Experimental periodontitis can now be studied in the dog, and means for preventing the disease can be tested under critical laboratory conditions. The pursuit of this work demands immediate and substantial support.

Second, the bacterial factors can now be studied in germ-free animals—animals that are grown from birth in a sterile atmosphere under conditions that meticulously exclude bacteria and infectious agents of all kinds. Here, then, is the great opportunity to see at last whether experimental periodontitis and/or dental caries can be produced in these animals in the absence of bacteria. Here is the chance to introduce bacteria from diseased human mouths to study which of them may cause periodontal disease or dental caries to develop. And here is the opportunity to introduce antibacterial, anti-inflammatory, and other chemical agents and therapeutic techniques to see how to arrest the disease process under conditions which permit detailed observations, exact measurement, and freedom

from the many variables that for years have complicated investigations of the disease in the human mouth. Preliminary studies indicate that dental caries can be transmitted to animals by the introduction of certain bacteria into their environment.

Third, the use of radioactive isotopes which are readily identifiable have permitted the study of the chemical changes which take place in the enamel and dentine. By the use of these tagged ions, the influence of nutrition, disease, and remineralization can be studied.

TECHNICAL PROCEDURES

Some investigations are in progress to develop filling materials which will chemically bond themselves to the tooth surfaces. Such a material, if it could be bonded to the tooth structure, would prevent the recurrence of decay now resulting from leakage due to the difference in the expansion and contraction of the filling material and the tooth structure.

Several studies are in progress to study the biological response of oral tissues to high-speed and ultrasonic dental drills. The trend in dental practice is to high-speed drills because of the rapidity of cutting and the decrease in heat produced, with the resulting pain. The safety of these cutting devices on the soft tissues needs evaluation.

RECOMMENDATION IN INCREASED RESEARCH GRANTS

Dr. HILL. The American Dental Association has recommended that the appropriation to the dental-research grants program be increased $1 million. This is an increase over H. R. 11645 of $750,000. I would like to discuss some of the reasons for this, if I may.

Senator HILL. Yes, sir.

Dr. HILL. I think that the American Dental Association very deeply appreciates the support that this committee has previously given to their recommendations, and 2 years ago the committee made a very substantial increase in this appropriation. As a result of that increase, these things have happened: At that time, there was less than 50 percent of the dental schools in America that were conducting research in oral health and disease. Today there are over 90 percent of the dental schools that are in active research programs in this field.

Senator HILL. In other words, the research effort was stepped up from what it used to be, only half of your dental schools, to 90 percent of all dental schools?

INCREASE IN RESEARCH PROGRAMS

Dr. HILL. Yes. As to the actual number of research programs that are underway, there has been a sixfold increase during this same period.

Senator HILL. Sixfold, you say?

Dr. Hill. Sixfold. There are now some 300 active programs, approximately, that are being supported by this research. Also, during this period there have been 20 grants made for training programs.

One of the things which was recommended by the Congress some 2 years ago was that a certain amount of money should be set aside for the training of men in the basic sciences or for the further conduct of research. During these 2 years, 20 such grants have been made and 15 are active at the present time.

There are now 31 men in actual training and there are 19 men who have completed their training and are in the field of dental research,

This also presents a problem because these men, when they com-

plete their training, are coming in with applications for grants. That is one of the things that we had hoped for and one of the purposes for which this program was set up; but it also increases the problem of financial support.

The amount of research that is being conducted today in nondental institutions, and that means hospitals, institutions that do not have dental schools—has very greatly increased, and is at an alltime high.

Then there is also an intangible result, and that is, the general influence that this very active research program has had on dental education to the undergraduate student with 90 percent of the schools having active programs. It is having a very material influence in creating in the undergraduate teaching program a sense of the scientific aspect that goes along with an active research program.

Senator HILL. It is most important that that sense of scientific research be encouraged and challenged at that particular period in a man's life, is that not true?

Dr. HILL. It is very, very important, and it is having a very definite effect on the number of men that are indicating a desire to go into a scientific field or a scientific work for their career.

ADVANCES IN DENTAL SCIENCE

Now, there are a number of very, very significant things that have gone on during the last year, and I do not think that I shall take your time to discuss them in any detail, but I do want to call to your attention, 2 or 3 of those things. First, there has been the work that has been going on in tooth bank transformation, the chemical remineralization of decayed teeth being now apparently possible to do. We have this work going on in cleft palate, both in prenatal detection and the prevention of some of the contracting influences that occur as a result of a lack of bone as a postnatal thing, and methods for the correction of them have been rather important.

There has been very excellent work in periodontal disease; and also, one of the things which is of great interest, and I would just like to mention it, is the work going on with germ-free animals. It has now been shown that you can transmit to germ-free animals dental caries by inoculation of the disease. There is a considerable amount of evidence that insofar as this animal experimentation is concerned, you can transmit dental caries from one animal to another. Now, this is introducing a new field. There is no evidence of this in human relations at the present time. We do not know whether this would exist in human relations, whether the bacteria that are related to dental caries are so widespread and so obvious, that the infection is actually transmitted from one person to another; but it opens up a great field of speculation.

There is also some very excellent progress being made in the development of materials which chemically bond themselves to a tooth. If such a thing could be developed, it would be a wonderful step forward in the actual treatment of this disease.

One might go on to a great length as to some of the work that has been done, and I am reciting these to show that this has been a very successful program up to date, and there is a need that this work be continued and perhaps expanded into many different fields, so that there is need for a considerable expansion in this program.

SITUATION IN PRESENT GRANTS PROGRAM

Now, actually, the situation as it exists today, is that the grants program has a moral commitment to support 157 grants for a total of $1,907,000 and there are 48 grants which will be continuing grants, for which there is no moral commitment at the present time, involving a little over $500,000. There are 39 grants that have been approved, both by the study section and by the council, as being worthy grants, but for which they have not had money to activate, and those are standing as unactivated grants. They total $460,000 or thereabouts.

Then there is a number of new applications that will come in during this coming year. We do not know what they will be, but if we can anticipate that they will be no greater than during fiscal year 1958, they would amount to $1 million, that is, if 86 grants came in during 1958 it would involve a little over $1 million.

FUNDS NECESSARY

The total then in the grants program that would be necessary to activate this in the manner in which we would like to see it activated would be a little over $4 million.

Now, I think that I have tried to show what has been done with this money. I think the American Dental Association feels that it has been wisely used and that it has been productive in its results. It believes that the program should be allowed to expand at a modest but constant rate until it has reached a desirable level.

The American Dental Association believes that, because of this wise expenditure of the money, because of the capacity for increasing this service, it would be their request that this committee recommend that the appropriation for the grants program be increased by $1 million, or $750,000 over H. R. 11645, which made an increase of $250,000.

Thank you.

Senator STENNIS. I have a question I would like to ask but Senator Hill has just returned from his short interruption and I will withhold the question.

Senator HILL. All right, suppose we let Dr. Volker go ahead, and after he has concluded we will have the questions.

Senator STENNIS. That is all right.

GRANTS FUNDS INSUFFICIENT

Dr. VOLKER. I am Joseph Voker, the director of research and graduate studies at the University of Alabama Medical Center and the dean of the Dental School and I am very much interested in this legislation as it affects dental research and dental training.

I was very pleased that the House of Representatives had given favorable consideration to the legislation that would authorize the construction of the National Institute of Dental Research.

I have said it before, and it still goes, that this building is badly needed for the continued development of the unusually outstanding intramural research programs and it is of course my hope that the Senate will permit the realization of this dream.

Now, relative to the proposed House appropriation for the allocation of moneys, this carries with it $2,971,000 for research grants, $423,000 for fellowships, and $450,000 for training grants money.

I believe that each one of these sums is inadequate when we consider the magnitude of the oral health problems of the United States. It is my belief that an appropriation of $4 million for research grants, $600,000 for fellowships, and $1 million for training grants is the minimum need for a realistic program.

GRANTS STILL UNFUNDED

In defense of this statement, I would point out that it has not been possible with the present funds to finance a large number of research grants that were recommended for fiscal year 1958.

To understand the importance of this action is should be realized that these projects had met the high standards of approval of the study section and advisory council of the National Institute of Dental Research and that these reviewing boards had one of the highest rejection rates of any comparable National Institutes of Health groups. This supports the view that these projects were carefully scrutinized by critical and competent authorities and had been deemed worthy of support; yet we were unable to support them.

It is also pertinent that the present appropriation for research grants is so limited that it has precluded the support of badly needed fact-finding research. It is necessary, with our present unfavorable dentist-to-population ratio, that we accumulate information on the various factors affecting dental manpower distribution and utilization. A larger appropriation would permit this to be done. If we had a larger appropriation, then we could begin to broaden the scope of our activities so we could support this type of research.

COMPLEX FACTORS IN ORAL DISEASES

I think it is also evident, on the basis of the testimony of Dr. Hill, and also my own personal experience, that the factors responsible for major oral disease are extremely complex and their solution will require research workers with superior abilities and unusual training in the basic biological and physical sciences.

I might say that I make this statement on the basis of being the director of research in all of the medical areas within our medical center, and I know that the intensity of these problems compares favorably with any problem with which we are faced.

The best assurance that we will have these individuals available for this broad attack is that we expand our present fellowship training program.

This would permit us to offer to outstanding dental undergraduates and graduates and their counterparts in the physical and biological sciences the opportunity of adequate preparation for careers in dental research.

TRAINING PROGRAM

As to the training programs, I would call your attention to the fact that there have been several recent dental manpower surveys by official commissions and they are in agreement there must be a

drastic expansion of the educational facilities if we are to maintain even our present standards of oral health care.

To show you the magnitude of this, I might say that the Southern Regional Educational Board has had a commission on dental education in the South, and, after looking into our situation in an area which is growing slower than any other section of the country, probably, we have called for the establishment of four new dental schools and the expansion of existing facilities, prior to 1975, in an effort to meet the anticipated need, and to maintain our present position.

Now, it is obvious, if we are going to establish these new dental schools we are going to have available a supply of adequately trained dental teachers. The most logical way to do this is to expand the present dental research teacher training program for the National Institutes of Health.

DENTIST'S ROLE IN CANCER DETECTION

Finally, I would like to call to your attention that the oral cancer training programs of the American dental schools have only a minimum of support from the National Institutes of Health. The maximum annual allocation to each dental school for this purpose is $5,000. This is in contrast to $10,000 per year for the 2-year medical schools and $25,000 per year for the 4-year medical schools.

I think we ought to appreciate that the dental practitioner has an important role in the early detection of cancer of the head and neck, which has been estimated to be the initial area of involvement of approximately 10 percent of all malignancies. Fortunately, many of these lesions lend themselves to arrest and cure if they are noted in their incipient stages.

As a consequence, every effort should be made to provide the undergraduate dental student with the prerequisite diagnostic skills. I am indicating therefore an increase in training grants appropriations which would make it possible for programs in the dental schools to be comparable to that of the 2-year medical schools; that is that there be a doubling of the appropriation from $5,000 to $10,000 a year.

I am very grateful for your consideration in permitting me the opportunity of testifying here.

Senator HILL. Those grants to the dental schools would be on a parity with those of the medical schools?

Dr. VOLKER. Two-year medical schools. In regard to the 4-year medical schools, I can certainly appreciate that they have a much greater problem than we do.

Senator HILL. Yes.

Senator Stennis, you had a question that you wanted to ask here?

NEW SCHOOLS IN DENTAL EDUCATION

Senator STENNIS. I wanted to ask Dr. Hill one question about these four new schools that you referred to in dental education. How are you going to get those? One of the plans—you say that the need had been reviewed by official commissions. What commissions are they? Is that your association?

Dr. VOLKER. This is the Southern Regional Education Board.

Senator STENNIS. Who will get those institutions?

Dr. VOLKER. It is obvious, from the deliberations of the commission, that there should be a new school in the Arkansas-Texas area. You know that your people have been going up to Memphis and have been going over into Texas, and Texas is growing, so there is a need for another school there. There will be a new school coming into being in Florida. The Florida Legislature has authorized the establishment of this. They have decided where it should be located but have not appropriated money.

South Carolina also authorized the establishment of a dental school within its medical center and the University of Kentucky at Lexington contemplates a new one.

So, progress is being made toward the realization of this objective. Then the existing dental schools will have to be expanded. Our dental school, for example, takes 52 dental students a year and we anticipate going up to 80 dental students.

We have tried, to the best of our ability, to make some of these positions available for boys in South Carolina, Florida, and Mississippi, that do not have dental education facilities.

Senator STENNIS. You think plans are well on the way to supply these?

Dr. VOLKER. Yes. We need the teachers, and we have to start training them now.

Senator STENNIS. That is a very interesting statement, and I thank you.

Senator HILL. In other words, Doctor, it is not just a question of having the buildings and the physical facilities, but if you are going to have these additional dental schools which we need, you have to start right now to train the personnel for them?

Dr. VOLKER. In this regard, last year, because we were privileged to have one of the more adequate training grants in the National Institutes of Health, we made available to the University of Puerto Rico, the University of North Carolina, the University of Texas, and the University of Pittsburgh, trained dental teachers needed in the basic clinical sciences, so I know that it can be done.

Senator STENNIS. As one of your close neighbors, may I acknowledge and also express our appreciation for the advances your school has made in this dental program.

Senator HILL. May I say we have a very fine dental school there, and it was Emerson that said, "The institution is but the lengthened shadow of the individual" and the individual in this case happens to be right here with us today.

Dr. VOLKER. Thank you.

Senator HILL. Are there any other questions, Senator?

RATIO OF DENTISTS TO POPULATION

Senator STENNIS. I just wanted to ask Dr. Hill what the number of people is, in civilian life, the ratio of the number of people to the number of dentists who are in the country. What is the average?

After you give me that, I want to compare that figure with our armed services. That is what I am coming to.

Mr. CONWAR. Senator, I can give you the current estimate we have. It is 1 dentist to 1,886 population.

Senator STENNIS. What is it in the armed services?

Mr. CONWAY. In the order of 1 to 500.

Senator STENNIS. Can any of you gentlemen pass on that or make recommendations with reference to the relationship there?

Mr. CONWAY. We have testified before your Armed Services Committee, and the House Armed Services Committee in the past, recommending that the ratio be set at a realistic figure. We have never indicated any specific number. We do not believe that that is wise to do.

Senator STENNIS. Before you go any further, how are we members of the committee to have any idea of a realistic figure, any more of an idea than you gentlemen would?

DENTISTS IN MILITARY ESTABLISHMENT

Dr. HILL. I can answer it this way. I heard one of the Armed Forces people make a statement the other day that they were not able to provide complete care on the basis that they are now operating.

Senator STENNIS. I hear that statement frequently, but what I want to get is somebody's judgment as to how many dentists they need. I get letters from dentists saying they do not need as many as they have. The military tells me they do not have enough. What I want to get is somebody's judgment on it that is not connected with either one.

Mr. CONWAY. I think these factors must be considered in a military dental program. First of all they have the question of training their dentists to become part of the military machine.

Senator STENNIS. Excuse me. Now, I do not want to cut you off, but I have heard all the arguments and I just want to know if you can give us an estimate on how many you thought they ought to have?

Mr. CONWAY. I do not believe we can.

Senator STENNIS. I do not want to delay these hearings on that, I wish you would give us an estimate, Doctor. Are you going to venture a number?

Dr. HILL. I would rather not. I do not feel competent to venture a number.

Senator STENNIS. I beg your pardon?

Dr. HILL. I do not feel competent to venture a number.

Senator STENNIS. Someone has to make a decision and we are up against it. I certainly do not think I am competent, but I feel as though I can get professional advice and I wondered if you felt prepared to answer, but you do not want to do it?

Dr. HILL. I do not.

Mr. CONWAY. Could I make one comment, Senator?

Senator STENNIS. Yes.

Mr. CONWAY. In the military services, the persons in the military service receive dental care you might say, on a compulsory basis. They are required to have their dental treatment. In civilian life, only 40 percent of the people see the dentist in 1 year. In addition to that, the military must rehabilitate a great number of persons coming into the military service. I think that accounts for the low ratio of dentists to military population.

Senator STENNIS. Well, the military has them, too, at times, and they are not subject to as much trouble as they would be in later life, but we are hearing those arguments. I just want an estimate.

Anyhow, I thank you for your comments.

Senator HILL. Are there any other questions, Senator?

Senator STENNIS. No, thank you. I do appreciate their fine statements.

Senator HILL. We certainly appreciate you gentlemen being here and appreciate these very informative and helpful and spendid statements.

CHILDREN'S HOSPITAL, WASHINGTON, D. C.

STATEMENT OF DR. ROBERT PARROTT, PHYSICIAN IN CHIEF AND DIRECTOR, RESEARCH FOUNDATION, CHILDREN'S HOSPITAL, WASHINGTON, D. C., IN BEHALF OF NATIONAL CYSTIC FIBROSIS RESEARCH FOUNDATION

WORK ON CYSTIC FIBROSIS

Senator HILL. Dr. Parrott, I am very sorry that I have to go to a joint House and Senate conference on an agricultural appropriations bill for a few minutes. I may not be able to hear your full testimony, but I will assure you, sir, I shall read it most carefully, and we are delighted to have you here. I am going to turn the meeting over to Senator Stennis of Mississippi.

Senator STENNIS (presiding). Thank you, Senator, I am sorry you have to leave.

Senator Hill has to go to this meeting on the Department of Agriculture bill, and it is necessary that he be there, so I am very glad to have the chance to be here and to hear you, Doctor.

You may proceed.

Dr. PARROTT. Mr. Chairman and gentlemen. When the House of Representatives Committee equivalent to yours accepted the testimony for the present Department of Health, Education, and Welfare appropriations bill, many of its members heard for the first time of cystic fibrosis or CF for short. They heard that this was a disease affecting 1 in every 600 white children born, causing the death of 90 percent of its victims, but whose basic cause was unknown and of whose existence many physicians and scientists were not even aware. What they heard prompted them to issue a strong verbal request to the National Institutes of Health to learn more about cystic fibrosis and there was an increase in the budget for the National Institute of Allergy and Infectious Diseases in part to do this.

I am here to defend the need to learn more about CF and to encourage the Senate further to back the National Institutes of Health in their efforts to that end.

As a citizen witness I represent the local chapter of the National Cystic Fibrosis Research Foundation. Although my own area of special research work has been in the field of children's virus diseases, I believe that I am in a position adequately to testify to the need for added research in CF for reasons which are recorded in my prepared text. I am sure, however, that any of the thousands of children affected with CF and their families would be much more powerful witnesses than I. In fact, I have with me letters from a number of them and I would like to have them inserted in the record if this is

possible, and I certainly hope that the members of the committee will take the time to read them.

Senator STENNIS. How many letters do you have?

Dr. PARROTT. There are about 14 letters. I could give you instead just some of them, if you prefer.

Senator STENNIS. I think that would be better. We will put those in the record. You know we do not want the record to be too voluminous, so if you can select 5 or 6 typical ones out of the whole group they will be inserted in the record.

Dr. PARROTT. I will be glad to.

(The letters referred to follow:)

ARLINGTON, VA., *May 12, 1958.*

Dr. ROBERT PARROTT,
Physician in Chief, Children's Hospital,
Washington, D. C.

DEAR DR. PARROTT: I understand that you are going to testify before a Senate committee regarding an appropriation of vital importance to cystic fibrosis children and their parents, i. e., an appropriation that would further research on cystic fibrosis. May God bless your efforts.

We have a perfectly darling little 5-year old, Ellen, who has cystic fibrosis. We have been so fortunate with her, she is small but has been very well. Her condition was diagnosed early and with the knowledge gained in recent years about the disease, she has relatively speaking, thrived. Now the next 15 years are terribly important to her and to other children like Ellen who are alive, happy, and active because of the work already done with cystic fibrosis. As parents of a child in this category we feel that we are temporarily safe, but we are waiting for the answer to the problem which can only be attained through continued research and public consciousness.

Please feel free to call on us for any help we can give.

Sincerely,

JULIA T. FERRITER.
Mrs. John B. Ferriter.

WASHINGTON, D. C., *May 12, 1958.*

Dr. ROBERT H. PARROTT,
Physician-in-Chief,
Children's Hospital, Washington, D. C.

DEAR DR. PARROTT: We understand that you are to testify before a Senate committee with regards to the National Institutes of Health and research on the cause and cure of cystic fibrosis. As young parents who have lost a child to this disease, we are most certainly behind such a program and pray that it may be succsssful.

Our experiences have not been pleasant, and it was indeed heartbreaking to see our son's health fade and wither in his short 26 months of life. We were told from the first diagnosis that there was no cure for CF but, as many other parents feel, we could not sit back and watch his life ebb away without taking every means within out reach to keep him with us. No one was able to tell us why he had this disease, other than that it was congenital. Nor was there any ray of hope that he could be cured. All that was offered to us was a course of constant hospital care, expensive medications as preventative measures, and periodic reports reflecting his condition as a downhill trend at all times.

These thoughts are with us many times, since the death of our son, and our sympathies go out to the many thousands of parents who are now facing, or will face, the same sorrows. This need not be the case, if medical science is enabled to carry out the necessary research to end the dread of this disease.

Today, as laymen, we are doing all that we can to fight cystic fibrosis. We hope that the Congress, and the United States Government will follow this same course, and that we may all succeed in this common cause.

Very sincerely yours,

Mr. and Mrs. JAMES H. LANGTRY.

SEAT PLEASANT, MD., *May 12, 1958.*

DEAR DR. PARROTT: I hear you're speaking before Congress on cystic fibrosis. I think it's wonderful. If only they could understand the effects of cystic fibrosis children in the family. Thank God that all the medicine Johnny takes has kept him alive so far.

Until recently, my husband has had two jobs in order to make ends meet. Due to a layoff he now holds one job. It can be pretty tough when your medical bill runs around $50 or $60 each month. Best of luck when you speak to Congress.

Sincerely,

RUTH E. MITCHELL.

ALEXANDRIA, VA., *May 12, 1958.*

DR. ROBERT H. PARROTT,
Children's Hospital, Washington, D. C.

DEAR DR. PARROTT: Hearing of your opportunity to speak before the Senate Appropriation Committee re cystic fibrosis, I should like to take this opportunity to wish you success in this special effort. It has been heartbreaking to parents like us to see the life of an otherwise healthy child snuffed out when afflicted with cystic fibrosis.

Doctors and nurses did all they knew or could do but it was just not enough. Research is needed and our little girl, now buried at Arlington National Cemetery, is proof of this.

Sincerely.

HERBERT N. HOLSTEN.

ALEXANDRIA, VA., *May 11, 1958.*

DR. ROBERT H. PARROTT,
Physician in Chief, Children's Hospital.

DEAR DR. PARROTT: We are so pleased and gratified to hear that you will appear before the Senate Appropriations Subcommittee to tell them about cystic fibrosis. Surely they will understand the urgency that we, as parents, feel when the committee hears how this disease strikes and withers alert and beautiful children from their earliest days.

We feel fortunate that our 2½-year-old twin boys have thus far suffered few major complications, but our hopes and prayers for their future are all centered around immediate cystic fibrosis research. We watch our boys dietary problems daily, hear them cough at night, and struggle through what would ordinarily be minor colds, knowing that we must not rest, but must seek constantly for help in finding a cure. Eventually the medical scientists will find out what causes cystic fibrosis and will also find a cure, but it is with alarm that we realize these discoveries might not come in time to benefit our Sandy and Freddy and the other cystic fibrosis children we know who are presently fighting against this disease.

Please tell the Senate committee that we cannot wait for years, if we are to save the children we love and in whom we see such promise.

Best wishes to you at the hearings.

Sincerely,

ALEXANDER M. MAISH.

CHEVY CHASE, MD., *May 13, 1958.*

DR. ROBERT H. PARROTT,
Physician in Charge, Children's Hospital,
Washington, D. C.

DEAR DR. PARROTT: As a parent who has had to watch, helpless and bewildered, as our daughter slowly died, I write to add one more voice to the growing chorus of distraught parents across the Nation which is calling out for help against cystic fibrosis.

Twenty years have now passed since cystic fibrosis was first recognized as the terrible and mortal peril it is. In that time our baby and thousands of others have wasted away to death. We must have a full-scale assault on this heartless child killer.

It must be that there is, somewhere, a cure for this killer. The terrifying aspect of cystic fibrosis is heightened by the fact that it may well strike the children or the grandchildren of any of us alive today. We who have achieved maturity are the lucky ones. But for the grace of God, any one of us could have been born only to weaken, suffer, then die with cystic fibrosis.

Cystic fibrosis is not dramatic. Cystic fibrosis is a quiet killer. Cystic fibrosis is a silent assassin which does not cripple or deform. Cystic fibrosis eats away life from babies and children from the hidden inside. There are no gross and pitiable outward signs to evoke the sympathies of those who see them.

Perhaps I am wrong in seeking to elicit such sympathy where cystic fibrosis does not. If I am wrong, it is because there wells up inside me a terrible loneliness for that little girl who lies now in Arlington Cemetery. Our baby daughter, at 9 years of age, was a soldier as certainly as are her sleeping neighbors. She fell virtually in the beginning of this fight against cystic fibrosis.

On behalf of our little Dee and all cystic fibrosis victims, those who have fallen and those who continue to fight, let me join with you in your efforts to conquer this disease. Research can find a way if there is enough and in time. If there is anything which my wife or I may be able to do in order to help, please call on us.

Sincerely,

JAMES E. WEBER.

DESCRIPTION OF DISEASES

Dr. PARROTT. I have, in addition, a brochure prepared by the National Foundation, describing cystic fibrosis.

Senator STENNIS. You can leave some of those for our file.

Dr. PARROTT. Yes.

Since it is not practical to bring these children before you, let me attempt to describe this disease and to personify it in a composite child called Johnny H.

Cystic fibrosis of the pancreas (fibrocystic disease of the pancreas, muscovisidosis, exocrinosis) is a disease affecting children predominantly, which shows up in any or all of the following ways.

(1) First, there is an increased viscidity or thickness of the fluids secreted from the various so-called exocrine organs of the body, such as the pancreas, which lies close to and empties its fluids into the upper intestine.

(2) As a result of this thickness there is an insufficiency or absence of enzymes which come from the pancreas. In fact, one of the diagnostic tests for this disease is to demonstrate an absence of enzymes after withdrawing material from the upper intestine through a tube. Ordinarily the pancreatic enzymes aid in the digestion of the basic foodstuffs so that they can enter the bloodstream for distribution to the body.

Because of the absence or diminished amount of these enzymes, Johnny H. is always hungry. Despite the fact that he eats and eats, he does not absorb food well; he grows poorly. One might say that Johnny and other patients who have this disorder virtually starve within themselves. In addition, since the food is not digested, Johnny has very large, bulky, malodorous bowel movements and frequently has a "pot belly." A child with the most severe degree of CF may look like some of the gnomes that are pictured in certain fairy tales, undersized people with little flesh but with a large tummy.

(*b*) There is also a thickened secretion in the bronchial tree and lungs. Early in life this caused Johnny to cough and to have frequent infections of his respiratory tract which became more and more severe and led gradually to recurrent attacks of pneumonia. Now, Johnny has very severe debilitating chronic lung disease and virtually always

coughs. Certain segments of his lungs become obstructed and collapse.

(2) Another defect which CF victims show is that they excrete in their sweat and saliva an excess amount of sodium and chloride—salt. One summer, Johnny fainted in severe heat prostration as a result of this defect. However, it is this defect which has allowed one of the better tests for this disease; namely, the demonstration of an excess amount of salt in sweat or saliva when examined in the laboratory.

(3) Now, third, these youngsters demonstrate a peculiar susceptibility to infection with the organism staphylococcus. Most of Johnny's bouts of pneumonia have been due to staphylococcus but, since antibiotic usage, other micro-organisms are either joining the staphylococcus or replacing it. Some of these, such as the pseudomonas, are even worse than the staphylococcus. In fact, with most of these patients it is infection which kills them.

The diagnosis can be suspected clinically in many cases but newer methods of diagnosis based on the functional defects mentioned above are uncovering many variants from the classical case, and the examples of these variants are recorded in my prepared text.

The prognosis for life of these children is very poor. In the past, it was estimated that 90 percent of the affected children would die before they reached adolescence. Now, with improved diagnosis and a better understanding of treatment, it is predicted that 50 percent of the affected children will live to adolescence. This is still not very good.

Treatment, inadequate though it is, is directed toward the following:

METHODS OF TREATMENT

First, maintaining nutrition and in Johnny's case, this means large amounts of high protein foods, the administration of a medicine made up of pancreatic enzymes and the administration of high potency vitamins. All of these are very expensive.

Secondly, the treatment should include prevention and suppression of infection, and this means that Johnny takes antibiotic drugs daily. The bill for these drugs can run as high as $75 to $100 a month.

Thirdly, one must try to prevent and alleviate the chronic lung disease. In Johnny's instance, this means regular visits to a clinic for special treatment, with a machine which helps artifically to expand these segments of his lungs which tend to collapse. Every night Johnny sleeps in a homemade tent into which is fed a mist of water generated by a small compressor.

It takes little imagination to see what an effect such an illness must have, not only on Johnny, but on Johnny's family, emotionally and financially.

NEED FOR RESEARCH ON CAUSES

Even though CF was first recognized as an entity only 20 years ago, the clinical manifestations and the defects in function which lead up to these manifestations have been well described. Of the specific and basic cause, however, little or nothing is known.

Undoubtedly, a genetic factor is important in the development of the disease. According to genetic laws, any child born to a family

in which a previous case has occurred has 1 chance in 4 of developing this disease. Approximately 1 in 20 persons carry this genetic trait in a recessive form.

In other words, if 2 carriers of the trait marry, it is likely that 1 in 4 of their children will have CF. This disease has been estimated as occurring 1 time for every 600 to 1,000 live births. There are probably 7,000 new cases each year in the United States alone.

One in 25 deaths of children is due, in whole or in part, to CF. But although the incidence is quite high, and there apparently is a genetic factor, we still do not know the specific cause.

More research must be done—at a clinical level to help accomplish the ends of treatment just mentioned: combatting the nutritional defect, the infection, and the lung disease—and basic research directed toward such problems as the basic cause and cellular nature of the defect leading to CF, factors that make CF children peculiarly susceptible to staphylococcus infection and validation of the incidence and the genetic determinants for CF.

There is a primary need for an overall survey of the nature of the problem from a research point of view. The literature must be carefully searched and fruitful avenues of approach to the problem must be made known to responsible investigators, both within the National Institutes of Health and in various institutions throughout the country and the world.

It is true that many basic scientists, in fact many physicians engaged in clinical medicine, are not even aware of this disease. They must be made aware of it and those who are able must be encouraged to carry out appropriate research.

Until the goals of this research are reached, of course there is in many instances a crying need for aid to parents of these children. CF is very expensive in terms of time, money, lives and peace of mind. It strikes me that it would be a long-term economy if the Congress would see fit now to put sufficient funds into research on this lethal disease so that the basic causes can be found and effective treatment developed.

NEED FOR GREATER EMPHASIS ON PEDIATRICS

Senator STENNIS. Doctor, that is a very impressive statement, You are appearing here from the Children's Hospital in Washington, and there must be others that are interested in this subject besides yourself and your hospital.

Do you speak just for them? You made a very impressive statement. You are the best known in your profession.

Dr. PARROTT. Actually, sir, I represent the local chapter of the NCFRF today. However, your comment gives me an opportunity to express some related thoughts. Many of us responsible for training and research programs related to the health and welfare of children believe that in the various research and training study sections and grant programs of the NIH there should be more consideration of the child as a unit and the field of pediatrics as a specialty. To my mind there are several examples of a need for this. CF is one. Probably because CF is a disease affecting primarily children, very few research scientists and clinicians other than pediatricians are aware of it or of the potential for fruitful research related to it. Pedia-

tricians and those engaged in the relatively young field of pediatric research and education must be the evangelists then for CF. When I was employed at the NIH several years ago, I was instrumental in establishing a study program on CF but as I tried to implement the program I was amazed at how few of the scientists in any of the institutes had any idea of what CF was.

Another example of what many of us consider limited thinking in a research field results from the very high emphasis given to respiratory tract infections if they occur in members of the military populace or industrial groups in contrast to children. In adults, the 1 or 2 infections a year that may occur mean loss of money. I am amazed at how many administrative and scientific research personnel forget that children suffer up to 6 respiratory infections a year and that in general they are much sicker than adults when they get these infections. They forget that children lose time in school, sometimes have debilitating complications such as hearing loss and pneumonia. They forget also that many viral infections cause subclinical brain inflammation and may lead to varying degrees of mental deficiency. Every pediatrician and every parent knows that respiratory infections of children are important but to some of those who set the standards in the field and prepare the budgets, the incidence of these infections in children is not important if the children do not die and if there is no loss of work time or money. Here again many of us feel that incorporation of pediatric thinking into the research programs of the NIH would be advantageous.

A third example of a very high need for recognition of pediatrics as a field is in the area of research and training grants. No training grants are made available specifically for the training of pediatricians for academic and research careers. These grants are all made available by disease categories. Many of us feel that the first step in furthering good interested research into such problems as CF and respiratory infections of children is to train young pediatricians for academic and research careers. Once this is accomplished they will, as do almost all academic and research workers, branch into specific work in subfields such as problems related to CF.

RACIAL AND AGE CHARACTERISTICS

Senator STENNIS. Well, I am very much impressed with the fact that 20 years ago it was not recognized as a separate disease. It makes me think of the children in my own community, of about the age of my children, that passed away and they never did know what was the matter. It was really something in the stomach, as you pointed out.

Now you say here that 1 in every 600 white children are affected. Does it not affect children of other races?

Dr. PARROTT. It does, but less so. There is a much lower incidence in Negroes, and I am not sure, I do not think it is really known whether a completely nonmixed Negro would have the disease.

Senator STENNIS. You say that it affects 1 in every 600 white children and causes death in 90 percent of its victims. What about this other 10 percent? Do they get well or is there something else wrong with them?

Dr. PARROTT. At one point in the prepared text—which I left out in verbal testimony—it pointed out that there are many different manifestations of this illness, including intestinal obstruction in an infant, as one of its worst forms, which usually kills but also including the defect in excretion of salt from the sweat and saliva alone. By using the test for salt in sweat, we now know that there are some adults who have only sinusitis or a little bronchitis as a manifestation of that disease. We have also known some children who have grown through it, particularly those who have been diagnosed early, in the last 10 years, and have been treated as best we know how. Many of these are through adolescence and are young adults. This would account for the 10 percent.

Now, one of the problems with all of the figures on this is something you just pointed out, that there may be children in your community who have died of this but the fact of their dying of this disease was not recognized, and they may have been registered under deaths due to diarrhea or pneumonia or any of a number of different registered causes or death. CF is not a registered cause of death.

FUNDS NEEDED FOR CYSTIC FIBROSIS

Senator STENNIS. What is your specific request now, Doctor? How much money and for what?

Dr. PARROTT. Unfortunately, sir, I am not familiar with the actual budget for NIH as related to CF. However, I do understand that the NIH in the past number of years has spent only an estimated $26,000 to $62,000 a year on intramural research a year related to CF and that the extramural expenditures have been between $28,000 and $107,000 for projects directly or indirectly concerned with CF. Apparently only between 0.16 and 0.18 of 1 percent of the extramural grants allocated by the NIH were given to workers interested in CF. Considering the seriousness and prevalence of the disease it seems to me that far more money should be made available for work on CF, both within the walls of NIH and through its extramural grants program. Apparently both more space and personnel are needed at the NIH. As far as the extramural grants program is concerned, of course grants could only be given to investigators who submitted grant requests which seemed likely to be productive. However, I believe that the NIH through its extramural grants liaison officers should encourage responsible investigators to conduct research related to CF and there should be a readiness on the part of the study sections to make grant money available to investigators in the many research institutions throughout the country who wish to study CF.

There is one other specific project which I believe the NIH could and should undertake. That is, to create a conference of interested individuals who would search the literature related to CF and would make known to responsible investigators both at the NIH and in other research organizations those basic and clinical avenues of approach which would seem to be fruitful. I understand that the NIH is planning to collaborate in some such conference on CF. I believe they should be given all the support necessary for this and they should be encouraged to establish a continuing conference committee on CF such as committees available for study of influenza problems and poliomyelitis problems as well as problems in the rheumatic field.

There are many of us who feel that it is a large enough problem that there should be more propaganda on it, even in scientific fields.

Senator STENNIS. You feel it is being neglected now?

Dr. PARROTT. Right.

Senator STENNIS. Well, you have made a very impressive statement here, It has been helpful to me and I know it will be to others. Is there anything that you might wish to add?

Dr. PARROTT. No, sir. Thank you.

THE HILL-BURTON PROGRAM

STATEMENTS OF BOB FORSYTHE, ADMINISTRATIVE ASSISTANT TO HON. EDWARD J. THYE, A SENATOR FROM THE STATE OF MINNESOTA; JOHN de LAITTRE, PRESIDENT OF FARMERS AND MECHANICS SAVINGS BANK, MINNEAPOLIS, MINN., REPRESENTING THE UNITED HOSPITAL FUND OF MINNEAPOLIS AND HENNEPIN COUNTY; AND ROBERT N. BARR, SECRETARY AND EXECUTIVE OFFICER, MINNESOTA DEPARTMENT OF HEALTH, REPRESENTING THE ASSOCIATION OF STATE AND TERRITORIAL HEALTH OFFICERS

STATEMENT OF SENATOR THYE

Senator STENNIS (presiding). Our next witness is Mr. John de Laittre, from the Committee on the United Hospital Fund of Minneapolis, and I understand we have Mr. Forsythe, from Senator Thye's office, who is going to speak on this subject. We are sorry that Senator Thye cannot be here, as he is a very valuable supporter. However, we have his assistant.

Do you have a statement you want to make?

Mr. FORSYTHE. I have a short statement that Senator Thye desired to go into the record and we have with us Dr. Barr from Minnesota.

Senator STENNIS. Dr. Barr, we are glad to have you.

Mr. FORSYTHE (reading). I regret that due to a prior commitment in New York City, I will be unable to attend this morning's committee's session. My interest and support of the Hill-Burton program is well known to the committee members and the witnesses who will appear here this morning.

I wish to commend Mr. John de Laittre, president of the Farmers and Mechanics Bank of Minneapolis, and Dr. Robert Barr, secretary and executive of the State of Minnesota, Department of Public Health. Mr. de Laittre also appears this morning as vice president of the United Hospital Fund of Minneapolis.

This group has done an almost unbelievable job of fund raising in this city. They have progressed to a maximum self-help effort, but are still short of the total needs. Without Hill-Burton funds, this urgent program will be delayed or indefinitely postponed. I cite this as a typical example of the problems which exist in many of the Minnesota communities on a smaller scale, and doubtless in communities throughout the United States. No matter what size the community the problem is just as important and the need just as urgent.

I know that Mr. de Laittre and Dr. Barr will give the committee most valuable information and testimony.

Senator STENNIS. Thank you very much.

Well, gentlemen, it is a good symbol to be vouched for here by Senator Thye. He is a very valuable Member and a very valuable working member of this subcommittee and the Appropriations Committee.

We feel, too, we are making good progress here when we are getting such as bank presidents to come down and testify here on the Hill-Burton funds, and we are very glad to have each of you gentlemen here, and will be glad to hear from you.

Mr. de Laittre, I suppose you are going to testify first?

Mr. DE LAITTRE. Yes.

Senator STENNIS. Do you have a prepared statement?

UNITED HOSPITAL FUND OF MINNEAPOLIS

Mr. DE LAITTRE. My name is John de Laittre. I am the president of the Farmers and Mechanics Savings Bank of Minneapolis, but I appear here today in behalf of the United Hospital Fund of Minneapolis and Hennepin County, of Minnesota, of which I have the privilege of being first vice president.

The united hospital fund is a communitywide nonprofit voluntary corporation, formed in 1955 to meet the critical hospital needs of Minneapolis through community planning and financing.

Now I am sure Minneapolis is not alone in experiencing great pressure in its voluntary hospitals, and I am sure we are not alone in seeking local remedies. However, I personally am acquainted only with the situation within Minneapolis and Hennepin County.

In 1955, it was pointed out that while our population has risen 20 percent in 10 years, and hospital admissions have gone up 57 percent in the same period, bed capacity of the area remained virtually stationary.

As a result, by 1955, hospital waiting lists were commonplace; fire regulations were being routinely suspended to permit beds in corridors; rooms and wards were overcrowded; non-fire-resistant or obsolete quarters constituted 20 percent of the voluntary hospital capacity.

The united hospital fund was organized to find remedies for these conditions. Proposals involving $45 million for construction were made, and submitted by the hospitals. These proposals were evaluated by experts, according to the resources of the community and according to the priorities of the most critical needs.

A minimum program involving $34,458,000 was developed and agreed upon by the hospitals and the communities. Each of the hospitals, 15 hospital institutions, is now committed to a specific building plan. The plan has the following objectives:

1. Replacement of 525 beds now in use in obsolete and non-fire-sistant facilities.

2. Addition of 881 general acute beds to the 2,390 now in use. It is hoped this addition will meet the community's needs for at least 10 years.

3. Addition of 505 chronic beds to the 36 now in use.

4. Creating of 82 psychiatric beds within general hospital facilities. We had none in our voluntary general hospitals. The first unit completed and opened this winter was full within a week.

5. Expansion of a community blood bank now in operation. This blood bank services hospitals all over the State, is the official training center for civil defense for blood banking personnel for the State of Minnesota; and will undertake its training of civil defense personnel for rural areas June 1.

6. Expansion of the community's only voluntary psychiatric clinic for children will permit it to increase its present patient load 300 percent.

7. Creation of a vocational rehabilitation center to work in collaboration with physical medicine departments. Those are the objectives.

Now, how can we finance $34,458,000?

SOURCES OF FUNDS

Our hospitals are not only much used, but are also economically well managed. They have agreed to provide primarily through mortgage financing, almost 45 percent of the funds required, or $15,477,325.

Ford Foundation grants, announced at a most propitious time, make up $1,357,000, or almost 4 percent of the total building program.

Hill-Burton funds, specifically directed the construction of chronic and psychiatric facilities, have provided $623,675, or almost 2 percent of the total needs.

This leaves $17 million, more than 49 percent, which the United Hospital Fund has undertaken to raise through voluntary contributions.

With almost 2 years of campaigning behind us, we have received more than $5,300,000 in cash and we hold $7,900,000 in pledges payable over the next 3 to 5 years. This makes a total of $13,200,000 in contributions, by far the largest amount ever raised in any voluntary campaign in Minneapolis and Hennepin County.

I want to take my hat off to the many hundreds, if not thousands, of voluntary campaign workers who have gone out and worked for a period of 2 years to obtain this result. For instance, contributions have ranged from $1 to $1 million. Corporation gifts equivalent to $100 or more per employee have been frequent. Individual employee contributions rest at a remarkable average of $47.80. But the $13,200,000 will not do the work of $17 million. We need $3,800,000 more to put the $34,500,000 program wholly into effect.

USE OF REQUESTED FUNDS

The procuring at this time of the $3,800,000 would enable $10,597,000 in building projects to get underway promptly. About one-half of this could be started before the end of this year. The balance would begin during the first half of 1959.

Now the object of my testimony here today is to say that the availability of public funds could be a key to instituting and speeding up many jobs in construction, in the purchase of many building materials, in fabrication and manufacture of a wide range of equipment that has to go into the hospitals, and it is the key to the completion of creating some 2,800 permanent, full-time jobs, required to service the more than 1,400 beds to be added to our community, and these salaries, of course, will be added to private, not public, payrolls.

Now, sir, as vice president of the fund, I want to make it clear that we will continue our local campaign with all diligence. We will continue to try to raise all of the $17 million. My appearance before this committee is in no sense an abrogation of responsibility at the local level to finish the job that we have started.

EXTENSION OF HILL-BURTON ACT FAVORED

We do favor extension of the existing Hill-Burton Act with the fullest possible appropriation. Although metropolitan areas have not ordinarily been major recipients of Hill-Burton funds, we are appreciative of the great good done for the national health through this legislation. Further, we understand that there is a possibility of long-term Federal loans. These would undoubtedly be of considerable help. Although it must be remembered at this time that charges levied against patients, however, would be the only source through which hospitals could pay off such loans and the interest thereon. My appearance today, therefore, is primarily to urge your consideration in developing a program of Federal aid to metropolitan areas for hospital development, in addition to the Hill-Burton program, and in addition to the proposed Federal loan program. We believe that such Federal aid for metropolitan areas would be desirable for three reasons:

First, hospital construction, especially where adequate planning permits it to be properly undertaken, has both immediate and long-term beneficial effects on the economy. It not only creates jobs in construction and equipment, but these are quickly followed by permanent jobs in a ratio of two or more permanent employees per bed.

Second, stimulation of metropolitan hospital economy affects a wide area, because urban hospitals serve as focal points for training and research. Most personnel providing health services are trained in our cities.

Third, Federal investment in metropolitan areas would tend to equalize tax benefits with taxloads. Minneapolis and Hennepin County people, for instance, pay a substantial share of the State's Federal taxes collected in Minnesota, but Federal funds available for hospital development in Minnesota have had to be used primarily in rural and regional base hospitals.

Furthermore, our city's hospitals served a major portion of rural patients. For instance, 70 percent of our beds are consistently occupied by nonresidents. While our urban taxpaying population has to wait for hospital beds, 1 out of 6 of the beds available to them is occupied by nonresidents.

Finally, it is our feeling then that Federal funds made available to such programs as the United Hospital Fund would benefit the national economy and the public health.

Properly carried out, such investment would stimulate the economy without subsidy beyond the initial building program and would be of value to a vast region beyond the limits of our metropolitan area.

Mr. Chairman, I thank you for the privilege of being asked to appear here today.

RECOMMENDED NATIONAL FIGURE

Senator STENNIS. Well, you made a very fine presentation. I think it is a quite wholesome situation that you gentlemen have developed out there, and you have come here to testify about it in connection with this fund. As you see, this Hill-Burton fund, which started out largely in that fashion, has reached the rural counties. You were unable to keep doctors, but this was a major contributing factor in that field, as well as the situation with the hospitals. It has proven itself beyond the fondest expectations of its sponsors.

I want to ask a question or two now. Do you have in mind a national figure that you would recommend here? You know your needs, as you say, but you have not studied this matter beyond your own needs there. Is that correct?

Mr. DE LAITTRE. That is correct, sir, and I would have to refer this to Dr. Barr of the Minnesota Department of Health.

Senator STENNIS. All right, Dr. Barr. We will hear you now. We might have some other questions of Mr. de Laittre afterwards.

Dr. Barr, you may proceed in your own way. We are very glad to have you here.

Dr. BARR. I am the executive officer and secretary of the State board of health of Minnesota. I happen to be on the Surgeon General's Committee for Hospitals and Hospital Construction, and a member of a number of other such committees, but I have submitted copies of my report to your committee. If it is received by you I will just talk off the cuff.

Senator STENNIS. I think that would be more effective, really.

We will put your statement in the record at this point, if you wish, and then you may talk to the high points of it.

Dr. BARR. Yes.

(The statement referred to follows:)

STATEMENT BY ROBERT N. BARR, M. D., M. P. H.,[1] SECRETARY AND EXECUTIVE OFFICER, MINNESOTA DEPARTMENT OF HEALTH, REPRESENTING THE ASSOCIATION OF STATE AND TERRITORIAL HEALTH OFFICERS

The Minnesota State Board of Health and the Minnesota Legislative Interim Commission on Indian Affairs have recommended that the information presented before the House Subcommittee on Labor, Health, Education, and Welfare, dated February 26, 1958, on Indian health, be transmitted to the Senate Subcommittee on the Department of Labor, Health, Education, and Welfare of the Committee on Appropriations, along with certain specific details relative to the needs for funds in relation to implementing Public Law 85–151. The abovementioned attachment recommends that the appropriation for Indian health activities for the fiscal year 1959 be increased by $5 million, bringing the appropriation to $45,225,000. It also recommends that appropriation for construction of Indian health facilities be increased in such a manner as to implement Public Law 85–151. The House appropriated $750,000 for this purpose. It is recommended that an additional amount of $1 million, bringing the total to $1,750,000 be appropriated. This will make it possible for the Surgeon General to assist in the construction of Indian beds in those community facilities providing such for Indians and whites alike which at the present have started construction or are in a position to undertake construction during fiscal 1959.

It is also suggested that the Surgeon General could act more efficiently in implementing Public Law 85–151 were the Appropriation Act itself to carry specific phraseology authorizing him to participate in all construction taking place after the date that Public Law 151 was passed; or even better yet, such phraseology as

[1] Vice chairman of the special committee on Indian affairs of the Association of State and Territorial Health Officers; member, Advisory Committee to the Surgeon General, PHS, on Indian Health; member, national committee on Indian health of the Association on American Indian Affairs, Inc.; adviser to the Minnesota Legislative Interim Commission on Indian Affairs.

would authorize the Surgeon General to participate in the construction of beds in those hospitals specifically planned to provide hospital services for Indians as well as non-Indians in those areas where such hospitals have either replaced Indian hospitals per se or the need for separate Indian hospital facilities. Further, it is suggested that the phraseology authorize the Surgeon General to participate in developing community hospital services for the benefit of Indians even though construction of these hospitals as community projects was in process at the time that Public Law 151 was passed.

Based on data from 6 States the Indian affairs committee of the Association of State and Territorial Health Officers has estimated the current needs in these areas for hospital beds to be 138 and outpatient facilities to be 5. The needs for Minnesota are included in these totals but Minnesota's requirements are more specifically shown in the attached tables. It can be seen that if complete participation were realized under Public Law 151 the cost in Minnesota would amount to $650,950. If such participation were not available until after August 1, 1957 the possible prorated Indian Service participation would amount to $537,353. And, if Indian Service participation were delayed until April 1, 1958, the prorated amount would be $388,881. It is apparent that Minnesota alone could consume, at a minimum, half, and at a maximum, nearly all of the $750,000 which the House has appropriated for Public Law 151 On this basis, it is estimated that an additional $1 million would be required to carry out the projected plans in the five other States whose needs were studied by the Indian affairs committee of the Association of State and Territorial Health Officers.

In the short space of only 2½ years the Division of Indian Health can point to a record of progress which is amply documented. There is no field of medical service and no type of medical facility which cannot be shown to have been used more intensively than ever before. Hospital admissions are 32 percent higher; the average patient load and the patient days of care are 13 percent higher; outpatient medical services are 33 percent higher; and births in the hospital, already near 100 percent in some areas, are overall 10 percent higher.

Aside from purely hospital-based services, other types of facilities are being utilized with increased frequency such as outpatient services in hospitals and health centers and visits to dental clinics. In addition, field health services are now administered regularly at 70 health stations and their satellite locations in the United States where previously no such services were available at all. There are now 175 such health stations engaged in some full-time activity. The visits to doctors and nurses at such stations as well as the work in 13 school health centers at BIA boarding schools has also increased. Completed courses of immunization, a good measure of public health efficiency, have increased 57 percent. Finally, the expenditures for service expansion through the use of existing community resources have nearly doubled.

This increase in services offered and accepted has been made possible by an increase in the personnel necessary to administer them. As of the end of 1957, there were over 900 more persons in the division of Indian Health than were transferred from the BIA in 1955. The total number of such personnel is now 4,480. The most significant of the increases in personnel have occurred in the "infantry" of medical endeavor, physicians, nurses and dentists. The number of physicians employed has nearly doubled. The number of public health nurses (still insufficient) has increased. The number of dentists (still woefully inadequate) has almost doubled. Auxiliary personnel such as pharmacists, sanitary engineers, sanitarians, sanitarian aides and dental assistants have shown a commensurate increase. Beginnings have been made in the utilization of health educationists, medical social workers and community health workers. The nutritional front which underlies some of the health problems has been invaded by the employment of five nutrition consultants. This too is only a beginning.

It is thus obvious that if facilities are available, the Indians will use them. There may be an initial hesitation but they will be used. The Indian health problem is not insoluble; it is just very difficult. The specific medical entities that make up the Indian health problem require no mysterious or bizarre remedies. They are all amenable to standard procedures. It is only necessary to have the personnel and the facilities to administer them. Admittedly the administration has its own difficulties which are inherent in any endeavor which has an intercultural component. This latter component is also one which is receiving increasing attention from the Division of Indian Health.

The intensified use of medical services and facilities has led to appreciable and readily measurable results. For example there has been a 30 percent drop in newly discovered cases of tuberculosis since 1954. The death rate for this disease has dropped 25 percent from 1954 to 1956. These figures apply to the United States. In Alaska there has been an even bigger drop in the tuberculosis death rate, 57 percent. Infant mortality, although still much too high, showed a drop of 17 percent. The most dramatic demonstration of the effect of health measures is seen in the shift of positions of the leading causes of death. Heart disease, the leading cause of death in 1954, is now replaced by accidents. Tuberculosis, for many years the leading cause of death, is now in seventh place.

These health gains, however, are due to more than the impact of increased personnel and facilities. The DIH has brought to its task all of the elan of a crusader accepting a new and challenging experience. Its efforts are backed up with the esprit de corps of an agency which has a long and honorable tradition of service. The DIH has reorganized and rechanneled the medical effort into more effective working units such as special and scheduled clinics as prenatal, postnatal, well-baby, dental, general medical and surgical, health centers, etc. It has engaged in career development by its personnel training activities which have now been expanded to include the training of new groups of personnel. Special case-finding endeavors have been made in connection with such diseases as trachoma, tuberculosis, and crippling conditions requiring orthopedic, reparative, or plastic surgery. Special research projects include the important field of chemotherapy with antituberculosis drugs.

The health gains, satisfying as they are, still fall short of even the most modest goals. The tuberculosis rates are far above the records of our best States and substantially above the records of our average States. The infant mortality, which in any age and in any place is the best measure of a people's health sophistication, is still medieval in character. There is still far too much disease which is preventable by the simplest of hygienic, sanitary, and medical measures. It is trite but still true to state that the present health conditions among Indians are similar to those which prevailed in the country as a whole at the turn of the century.

The job then has just begun. The ultimate goal must be to make the Indians health status comparable to the health status of his non-Indian neighbor.

It is probably inaccurate to assume that holding the line on Indian health appropriations will hold the line on Indian health gains. In the first place, the Indian population is growing rapidly; the Indian birth rate is almost twice that of the non-Indian birthrate and this latter rate is now at an unprecedented high. Secondly, the physical facilities for Indian health work, even now in many instances either inadequate or obsolete, will continue to deteriorate unless revamped or replaced. Finally, having had some taste of the benefits already available, the Indians would justifiably want and expect that such benefits continue and even be amplified. Medical and health integration might very well precede cultural, political, and economic integration.

Those of us who have worked with Indians can envision the havoc that would be created by the interruption of services in any one place for even a short time. Even a year of neglect would bring an increase in tuberculosis; epidemics of diphtheria would occur; dysentery would again become a killing disease; and in general the whole job would have to be done over again. It has happened before; it can happen again.

The very backbone of the health program for Indians is the group of physicians and nurses who carry this program to the local site of administration. The recruiting, organization, education, and maintenance of such a group at an optimum level in quantity and quality is a major, perhaps the major, responsibility of the DIH. Because of the peculiar demands made upon it such a group might very well be considered an elite corps. Such a group not only has a hard job to do but must do the job under the most trying conditions, environmental as well as psychological. It seems quite obvious that the creation and maintenance of such a corps would require the maintenance of salaries at a level commensurate with the difficulties of the job. In addition, such professionals merit all the ease and comfort that can be supplied them whether it be in their working environment or in their living quarters. For them, acceptable hospitals or duty stations and adequate living quarters should be considered a necessity, not an inducement.

However, to be realistic, it will probably never be possible to have such an elite corps at what might be considered full strength. Because of this, as well as because it is considered philosophically desirable to do so, attempts must also be made to integrate health services for Indians into already existing community

health services in areas where this is deemed possible. Where such facilities already exist, contracting is all that is necessary. Where a community needs help to develop such facilities the provisions of Public Law 151 can be invoked. To implement the provisions of this law, the Surgeon General should be able to work with State governments in such a way as to insure rapid, flexible, and versatile negotiations.

The Indian affairs committee of the association of State and Territorial Health Officers after careful review of Indian health services and facilities with all States where Indians reside recommended that the appropriation for "Indian health activities" for the fiscal year 1959 be increased by $5 million (1958 appropriation $40,100,000; the 1959 administration budget request $40,225,000; the committee 1959 recommendation $45,225,000).

It is recognized that the development of community hospitals and medical services to include Indians where appropriate would reduce the pressure on the Division of Indian Health for the procurement of critical personnel and would enhance the integration process in that the Indian would secure his medical, health, and hospital services through the same channels as would all other citizens in the area.

The committee thus recommended that the appropriation for "Construction of Indian health facilities" be increased in such a manner as to implement Public Law 85–151 and make it possible for the Surgeon General to assist without unnecessary delay in community hospital construction wherever such is deemed proper.

We have no hesitancy in asking for increased appropriations in the face of the politicoscientific problems that confront the Nation today. A modest investment that will insure the happiness of a group of our own people appears to be justified. And, properly used, every dollar that is put into Indian health is an investment, not an expenditure.

SUMMARY

1. Progress has been made in Indian health programs.
2. This progress has been made possible by an increase in personnel, facilities, as well as by better management and programing.
3. The gains made are still far from a reasonable goal; the problem still remains immense.
4. Present appropriations may not even "hold the line" already established.
5. The overall needs are such as to require not only a continuation and expansion of present efforts by the possibilities of integration with existing community facilities must be fully exploited.

MINNESOTA DEPARTMENT OF HEALTH, DIVISION OF HOSPITAL SERVICES

Data regarding status of hospital projects providing service for Indians

Hospital and community	Ownership	Type of project	Total beds in completed facility	Estimated bed needs (Indians)[1]	Total costs	Cost per bed[2]	Hill-Burton funds provided	Date of part 4 approval	Date of bid opening	Possible prorated Indian service costs if Public Law 151 allowed complete participation	Estimated date of completion
Clearwater County Memorial Hospital, Bagley.	City-county.	Addition and alterations.	[3] 40	(7)	[1] $75,000	$10,714	(4)	----------	----------	----------	----------
St. Mary's Hospital, Detroit Lakes.	Church	do	[5] 88	(7)	1,366,350	15,527	$614,858	July 1, 1957	May 18, 1957	----------	Dec. 11, 1958
Mahnomen County and Village Hospital, Mahnomen.	County	New	25	8	480,810	19,324	189,000	June 25, 1957	May 4, 1957	$154,592	June 4, 1958
Lutheran Hospital, Bemidji	NPA	Addition and alterations.	[6] 80	21	800,000	10,000	[1] 450,000	----------	May 1, 1958	210,000	Dec. 1, 1959
Cloquet Community Memorial Hospital, Cloquet.	NPA	New	76	8	1,651,666	21,732	566,667	Sept. 26, 1956	Sept. 6, 1956	173,856	Feb. 14, 1958
Cook Community Hospital, Cook.	NPA	do	18	3	340,000	18,889	146,250	----------	Apr. 22, 1958	54,168	July 1, 1958
North Shore Hospital, Grand Marais.	County	do	12	2	350,000	29,167	157,500	Sept. 12, 1957	Aug. 16, 1957	58,334	Nov. 1, 1958
Total	----------	----------	339	42	5,063,826	----------	2,124,275	----------	----------	650,950	----------

[1] USPHS "Plans for medical facilities needed for Indian health services."
[2] Estimate based on total beds in hospital except for Bagley.
[3] 7-bed addition.
[4] Not involved in this addition.
[5] 32-bed addition.
[6] 28-bed addition.
[7] Not determined.

Status of hospital projects providing services for Indians as of Aug. 1, 1957, and Apr. 1, 1958

Project	Total cost	Total beds in completed facility	Estimated bed needs (Indians)[1]	Aug. 1, 1957			Apr. 1, 1958		
				Percent completed	Estimated value of work uncompleted	Possible prorated Indian service participation	Percent completed	Estimated value of work uncompleted	Possible prorated Indian service participation
Clearwater County Memorial Hospital, Bagley	$75,000	[2] 40	([3])		$75,000	[4] ($10,714)			[4] ($10,714)
St. Mary's Hospital, Detroit Lakes	1,366,350	[5] 88	([3])	8	1,267,826	[4] (15,527)	27	$1,056,448	[4] (12,005)
Mahnomen County and Village Hospital, Mahnomen	480,810	25	8	10	438,129	140,201	57	240,551	76,976
Lutheran Hospital, Bemidji	800,000	[6] 80	21		800,000	204,878		800,000	204,878
Cloquet Community Memorial Hospital, Cloquet	1,651,666	76	8	60	734,106	77,274	98	201,838	21,246
Cook Community Hospital, Cook	340,000	18	3		340,000	56,667		340,000	56,667
North Shore Hospital, Grand Marais	350,000	12	2		350,000	58,333	57	174,684	29,114
Total	5,063,826	339	42			537,353			388,881

[1] USPHS "Plans for medical facilities needed for Indian health services."
[2] 7-bed addition.
[3] Not determined.
[4] Per bed.
[5] 32-bed addition.
[6] 28-bed addition.

VALUE OF HILL-BURTON ACT

Dr. BARR. I might say, first, that this Hill-Burton Act probably is the finest piece of health legislation that Congress, in my opinion, has ever passed. It has done more to provide, not only facilities but services and then these side issues, also, which are tied into this, as you saw, and as were mentioned, such as the blood bank and the development of training of personnel through the States. All of these things are a part of this total development of this program.

This is because the majority of the States have said, "This is not just a brick and mortar program; it is a program to develop services as well as facilities for the people." It is true that it has been pointed toward the rural areas where the greatest needs were felt at that particular time. It is also true that only a very small portion of the hospital construction in the country today that has taken place in the last 10 years has been assisted with Hill-Burton money. I think the Minnesota figure represents that some $126 million of construction has been completed and $66 million in construction is underway, which has been assisted with $22 million of Hill-Burton money, which represents about 11 percent of the money. So it is quite obvious that not only do the cities not get complete assistance, but the rural areas do not either.

We have, at the present time, something like $108 million of construction loans for the planning boards, to be used as planning money for these construction starts.

You asked the question as to how much money could be used in the next 2 years, for example, in addition? The States collected some information, and the information coming out was that, neglecting to a large extent the renovation of hospitals, which is a very vital situation, the States could spend, or commit rather, in contracts, by July of 1959, $1 billion worth of construction if there was that much matching money available.

Minnesota could actually put over $50 million under construction contracts at that time. I might add one other figure we have there that would indicate on a time breakdown—and this was developed 2 months ago—we could put about $19 million on construction contracts by August 1, which would represent Hill-Burton money of about $8 million plus, and again by December another $10 million and again by June 30 of 1959 another $31 million, which represents a total of $61 million worth of hospital construction in the State of Minnesota alone that we can do.

NECESSITY TO RAISE MATCHING FUNDS

Now, obviously, this is not all going to be done now without matching funds. We recognize this, and you do, but this is eventually going to have to be done. I think this is the important point of it; these communities are ready to raise their 55 percent of the matching moneys so that every time we develop a hospital we not only provide a Federal dollar matched by more than $1 in local moneys, but we also provide employment for people and we have a mechanism by which we can actually handle this without a big increase and the setting up of an organization to do it. We have the plans developed in the State so that this would be sound and firm planning.

EMPLOYMENT STIMULUS

In addition to that, as was mentioned by Mr. De Laittre, once you have built this hospital, it is going to be run by the local people, by either the community or the voluntary church organizations or voluntary hospital organizations or by a county, and without any cost to the Federal Government.

In addition, it is going to provide jobs for men at the ratio of between—and this is across the country—between 1½ and 2 plus people for every hospital bed built.

So that, from the standpoint of even a recession, it has a very valuable contribution. I also understand that the American Hospital Association has suggested that obviously, in lieu of perhaps this, an amendment to the Hill-Burton Act, which would provide something like $75 million a year for renovation and remodeling of hospitals with a different priority because the big urban areas are the places that are being critically hit today.

We would favor that in Minnesota, and I am sure most States that have big urban areas would favor that as well. It is not that we want to take away from the urban areas—we still have plenty to do there as well as here—but the urban area has to take care of its own people, and then there are a certain proportion of its people that are under specialized problems in all the other areas around the State and sometimes out of the State of Minnesota. So we do not only mean to indicate that this will mean more beds, but it means specialized medicine for the rest of the State.

DEVELOPMENT OF LOCAL RESOURCES

I think that presents the kind of picture, Mr. Chairman, that we are facing. We are going ahead and developing local resources in every way possible, developing plans for hospitals in the rural and urban areas. We have put moneys in the urban areas, in chronic, psychiatric, and rehabilitation centers, and in the university, because this is the central hospital for the entire State. We cannot help these other hospitals, the big general hospitals in the cities, because we do not have enough resources.

Senator STENNIS. What do you mean "general hospitals"?

Dr. BARR. I am talking about the general medical hospital. It has a priority system wherein it is written into the bill that "priority shall be given to the place which has the greatest amount of rural population, the least per capita income, the least number of beds, and the greatest need," therefore their priority does not come up under this.

We have had this other, because, in the chronic and psychiatric and other special things that is where these nurses and technicians and rehabilitation people are trained. We must have trained people, if we are going to put in rehabilitation and chronic units and other things throughout the States.

NEED FOR FULL APPROPRIATION AND PROGRAM EXTENSION

So we are saying to you, that first, we need the full appropriation, and an extension of the program for 5 years. We are saying that there

is every place for a bill which would authorize either a larger appropriation or a bill which would authorize a special category in this remodeling and revamping of hospitals, and with some changes in the priorities so it would give emphasis to the urban areas. I think this pretty well covers the points I would like to raise under the Hill-Burton Act.

I do have one other thing under "Indian hospitals" related to the Hill-Burton program.

Senator STENNIS. Let's close it down on the Hill-Burton while we are at it, and then I am going to ask 1 or 2 questions, and I will ask Mr. Downey to ask you a few questions as pertains to Minnesota.

Dr. BARR. Yes.

Senator STENNIS. I want to thank you gentlemen for coming in here to testify.

I had occasion a little over a year ago to be in and around a hospital a great deal during the long illness of a very dear sister. Those little nurses and nurses' aids were running in and out all day, and the doctors were rushing from one room to another, and I found out where the real Christians were. Real Christianity is illustrated by the way many of them carry on.

SITUATION IN MINNEAPOLIS AREA

I want to ask Mr. de Laittre if you feel you have enough doctors in your area?

Mr. DE LAITTRE. In the Minneapolis area?

Senator STENNIS. Yes.

Mr. DE LAITTRE. Yes, sir; I believe we do.

Senator STENNIS. I mean the area you are familiar with.

Mr. DE LAITTRE. Yes, sir.

Senator STENNIS. How about nurses?

Mr. DE LAITTRE. We feel we can staff the additional facilities that are now being built and planned. Yes, sir, we do.

Senator STENNIS. This hospital program, as Dr. Barr said, one of the big things about it is the way it stimulated additional training of nurses and nurses' aids.

Now, do you have extensive use of hospital insurance out in your area, Mr. de Laittre?

Mr. de Laittre. Yes, quite extensive use through Blue Cross and other private insurance.

Senator STENNIS. Blue Cross and Blue Shield, I believe it is?

Mr. DE LAITTRE. Yes. Blue Cross and Blue Shield.

Senator STENNIS. Is that extensively used, or is there a great increase coming about in these last 10 years?

Mr. DE LAITTRE. That is my reaction. Dr. Barr may have the figures.

Senator STENNIS. Dr. Barr, I am just interested in the development throughout the country.

Dr. BARR. I cannot give the exact figures now, but we have a high percentage of coverage of this or other kinds of insurance.

Senator STENNIS. There has been a tremendous growth in that in the last 10 years?

Dr. BARR. Yes, sir.

Senator STENNIS. That has made it possible for so many more people to go to the hospitals than was formerly true. It has been a tremendous factor in aiding that throughout the country.

Mr. Downey will ask you some questions, to complete the record as to Minnesota.

TOTAL APPROPRIATION REQUIRED

Mr. DOWNEY. Senator Stennis and the committee are interested in knowing how much total appropriations are required for the purposes you have enumerated. That is you have spoken specifically of Minnesota's needs. This survey that was made at the request of the Senator indicates that in fiscal 1959 the States collectively would use in excess of $500 million for hospital construction—Federal dollars. Minnesota's portion of this is $26 million, so your testimony today is based on the assumption that you would need the full authorization, $210 million, to partially take care of these needs that you mentioned?

Dr. BARR. That is right.

Mr. DOWNEY. The full authorization?

Dr. BARR. Yes. I should add this, and I think you should know it, that this material that you see here [indicating] had to be gathered up in about 48 hours, so, in the State of Minnesota, we have essentially nothing as to the coverage on renovation of hospitals, so we have no exact figures, but we had this much that we could put in that we knew were in the planning stages, or they had their money, and were ready to move along.

AUTHORIZATION LESS THAN NEED

Mr. DOWNEY. Your portion of the maximum authorization, $210 million would be less than that figure that you stated you could use?

Dr. BARR. Yes. Our portion of the $210 million would be about $4 million and a fraction for Minnesota, I believe.

Mr. DOWNEY. And your needs are $26 million?

Dr. BARR. Yes, sir.

Senator STENNIS. All right, gentlemen; we thank you again for your testimony. I had a very fine visit up in your State once among your forests, and while there I stepped across the top part of the Mississippi. You come down to see us in Mississippi and we will fly you across it.

Thank you.

Dr. BARR. Thank you very much.

LETTER TO SENATOR CHURCH

Senator STENNIS. Senator Frank Church, of Idaho, has received a letter from Sister M. Alma Dolores, administrator, St. Alphonsus Hospital, Boise, Idaho, regarding the Hill-Burton program. Senator Church has requested that this letter be inserted in the record, so it will be so done at this point.

(The letter referred to follows:)

St. Alphonsus Hospital,
Boise, Idaho, *February 4, 1958.*

Hon. Frank Church,
United States Senator,
United States Senate, Washington, D. C.

Dear Sir: We have been advised that the President is requesting a reduction in the budget of the Hill-Burton program of $46.2 million from the present year's budget of $121.2 million.

We strongly urge you to work against this reduction in the amount of the appropriation and that the budget be at least as much as this year if it cannot be greater. We do not feel that the health needs of the Nation have been met as far as general hospital beds are concerned. Hospital construction is so costly that it cannot be undertaken unless aided by the Hill-Burton program. Therefore, we urge that you do all in your power to see that the appropriation is not cut.

We are most grateful to you for your cooperation.

Sincerely yours,

Sister M. Alma Dolores, *Administrator.*

Letters to Senator Anderson

Senator Stennis. Senator Clinton Anderson, of New Mexico, has written a letter to the chairman of this committee, Senator Hayden, transmitting a letter addressed to Senator Anderson from Dr. Stanley J. Leland, director of New Mexico's State Health Department, commenting on this same program. Both Senator Anderson's letter and that of Dr. Leland will be included at this point in the record.

(The letters referred to follow:)

United States Senate,
Committee on Finance,
February 24, 1958.

Hon. Carl Hayden,
Chairman, Appropriations Subcommittee for Health, Education, and Welfare,
United States Senate.

Dear Senator Hayden: I am enclosing herewith a copy of a letter from the New Mexico State Department of Public Health in regard to appropriations on Hill-Burton funds for the fiscal year 1959. I will appreciate any consideration you can give to the request of the New Mexico State Health Department.

Sincerely yours,

Clinton P. Anderson.

New Mexico Department of Public Health,
Santa Fe, *February 20, 1958.*

Hon. Clinton P. Anderson,
New Mexico Senator, Senate Office Building,
Washington, D. C.

Dear Senator Anderson: The New Mexico Department of Public Health has been advised by the Public Health Service that its 1959 fiscal year Hill-Burton allotment will suffer a serious cut provided that the President's message to Congress is acted upon positively. It is our information that the President asked for a $75 million appropriation for construction of hospitals and related health facilities during the next fiscal year as compared with $120 million appropriated in the current year. All States, of course, will be affected but I believe you will be interested in knowing how New Mexico will be affected. This letter will set forth that information to you.

The State and Territorial hospital construction authorities have recommended to the Surgeon General of the Public Health Service an extension of the Hill-Burton program for at least 5 years and full congressional appropriation, as authorized by the act. As a member of that group representing New Mexico, I also voted for this.

Under separate cover we are mailing to your office a copy of the current State plan which is the basis for the administration of the Hill-Burton program in this State. This will be revised for the 1959 fiscal year (as it is each year) the revision having now only started. Since this is a rather lengthy document, I have selected

information from it, and added comments as follows which I believe most pertinent to delineating the picture in the State to you:

If Congress appropriates the $75 million as recommended by the President it is estimated that in the next fiscal year, New Mexico will receive $349,167 in part C which authorizes construction of general hospitals, public health units, tuberculosis hospitals, and mental hospitals. This is about 52 percent of the amount received in the current year ($661,237). We expect to get the same allotment in part G ($300,000) as for the current year since the State now is receiving minimal allotment. (Part G includes funds for the construction of nursing homes, diagnostic and treatment centers, chronic disease hospitals, and rehabilitation centers.) Thus in part C the expected allotment for the next fiscal year will give the State only enough money to complete the high priority projects now underway and which were split into 1959 with possibly one additional relatively small high-priority project. The split projects referred to are: a new wing at Fort Stanton Tuberculosis Hospital and the Cibola General Hospital at Grants.

The existing State plan shows the following percentages of need met by category of health facility:

	Percent
General hospital beds	79
Mental hospital beds	30
Tuberculosis hospital beds	49
Public health units	63
Chronic hospital beds	15
Nursing home beds	32
Diagnostic and treatment centers	56

In New Mexico there is currently involved over $2,600,000 Federal Hill-Burton moneys in 21 projects which are in various stages of completion, some of them being nearly ready to open and others in early stages of planning.

At this writing we have requests for Federal grants to assist in construction of additional hospitals and related facilities in the fiscal year 1959 which amount to more than $2,900,000 in part C and almost $500,000 in part G. Also it is estimated that requests for the fiscal year 1960 will exceed $3 million.

Since the inception of the Hill-Burton program, New Mexico has received $7,205,111 of Federal money which has been put to excellent use in meeting needs throughout the State. Twenty-four new facilities have been completed through final Federal audit.

From 1950 to 1958 we have been able to show good progress in meeting needs. You may be interested in the fact that in 1950 the State had only 52 percent of the general hospital beds needed as compared with 79 percent now. We had 38 percent of the tuberculosis hospital beds needed as compared with 49 percent at the present time. We had 38 percent of mental beds required as compared with 30 percent at the present time. In chronic disease hospital beds we had 4 percent as compared with 15 percent now. All of these types of hospitals are eligible under part C. Obsolescence of older facilities, increased citizens' use of health facilities and our growing population, industries, and natural resources contribute to the continuing need for new construction.

This week we received an urgent request from the United States Public Health Service for estimates of additional hospital and medical facilities construction work which could be placed under contract by August 1, 1958, December 31, 1958, and June 30, 1959, with respective lists of projects on which such estimates are based. Enclosed for your information is a copy of the materials as submitted. These are the composite of known and estimated requests throughout the State. A similar estimate is prepared each year. Although these figures are in several instances gross estimates, it has been our experience with past reports of this type that nearly 100 percent materialize to fullfledged requests. For example, in the current year with an appropriation of $961,237 we had requests amounting to more than $4 million.

If you wish this department to furnish you with additional information we will be pleased to do so upon request.

Sincerely yours,

STANLEY J. LELAND, M. D., *Director.*

Senator STENNIS. Senator Anderson has also asked that there be included in the record a letter which he has received from Dr. Roy H. Turley, president, New Mexico Hospital Association, regarding the unmet needs of hospital construction in that State.

(The letter referred to follows:)

NEW MEXICO HOSPITAL ASSOCIATION,
February 6, 1958.

President ROY TURLEY,
Espanola Hospital, Espanola, N. Mex.
Hon. CLINTON P. ANDERSON,
Senate Building, Washington, D. C.

DEAR SENATOR ANDERSON: As president of the New Mexico Hospital Association and the administrator of the Espanola Hospital, I am writing to bring to your attention the proposed report that the Hill-Burton funds will be reduced by $46.2 million during the coming year. It is my understanding that this bill will appear before the Appropriations Committee in the very near future. Since we have no representative from New Mexico on this committee, I am asking you to contact the members of the committee urging them to restore the $46.2 million which will bring the amount of the appropriations back to the $121.2 million appropriated for the year 1957–58.

I am sure that you are well aware of the unmet need for hospital service here in New Mexico. At the present time Espanola Hospital is operating at more than 100 percent of capacity and we desperately need more bed space. Any influence which you may exert in having this amount restored to the appropriation will be greatly appreciated not only by the people of Espanola, but by all the people in New Mexico who are interested in health care for our people.

Very sincerely yours,

ROY H. TURLEY, D. D., *President.*

LETTER TO SENATOR CHURCH

Senator STENNIS. Senator Church has also addressed a letter to the chairman of this subcommittee, Senator Hill, enclosing a letter from Mr. W. Brooks Martin, head of the hospital facilities section of the Idaho State Department of Health, with reference to the hospital construction program in the State of Idaho. These letters will be included at this point in the record.

(The letters referred to follow:)

UNITED STATES SENATE,
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
April 9, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee for Department of Health, Education, and Welfare, Senate Appropriations Committee, Washington, D. C.

DEAR SENATOR HILL: As your subcommittee considers the budget for the Department of Health, Education, and Welfare, and particularly the Hill-Burton program, I hope you will consider the enclosed letter from W. Brooks Martin, of the Idaho State Health Department. Mr. Martin has sent me a copy of the Idaho State plan for the administration of the medical facilities construction program. This program shows not only the amount of work already accomplished with Hill-Burton assistance, but also the amount of work yet to be done. As Mr. Martin points out, a very important aspect of the Hill-Burton aid is the stimulation of local participation in this program.

A continuation of the program at not less than its present level is imperative, and with our burgeoning national population, increased appropriations could well be justified.

Sincerely,

FRANK CHURCH.

STATE OF IDAHO DEPARTMENT OF HEALTH,
March 31, 1958.

Hon. FRANK CHURCH,
United States Senate, Washington, D. C.

DEAR SENATOR CHURCH: In way of keeping you informed regarding the St. Joseph's Hospital project in Lewiston, its current status is presently encouraging. If Hill-Burton is not cut as previously indicated, and if it is in fact extended again, we should and will have an expansion project in Lewiston to

meet its needs. This project of construction could foreseeably get underway as early as this fall.

I am enclosing a copy of our new Idaho State Hospital and related medical facilities construction plan. I am sure it will fully explain our current Hill-Burton program in Idaho. It should be of interest to you, in that within the last 10 years, approximately $4 million of Hill-Burton aid has stimulated approximately $15 million in local moneys. This, I feel, is very significant and certainly justifies many of the secondary intents of the Hill-Burton legislation.

Of interest to you also may be the construction and current utilization of two new beautiful senior citizen centers in Moscow and Shoshone, built with Hill-Burton aid. A new center of this type is now 85 percent completed in Grangeville. If Hill-Burton continues, we hope to have new centers in Sandpoint, Boise, Rupert, American Falls, Pocatello, Blackfoot, and Idaho Falls. Under present Hill-Burton allocations, we should be able to construct 8 of these centers in the next 5 years.

We all look forward to seeing you again. With kindest regards and best wishes, we remain,

Sincerely,

W. BROOKS MARTIN,
Head, Hospital Facilities Section.

NATIONAL TUBERCULOSIS ASSOCIATION

STATEMENT OF DR. JOSEPH B. STOCKLEN, MEMBER OF BOARD OF DIRECTORS

PREPARED STATEMENT

Senator STENNIS, Dr. Stocklen, you have been with us before, I know, and we are glad to have you back again.

You proceed in your own way either by putting your statement in the record and hitting the highlights or in whatever manner you want to proceed.

Dr. STOCKLEN. Mr. Chairman, I will submit my statement, and I should like to speak briefly from some notes.

Senator STENNIS. Very fine. We will insert your statement in the record at this point.

(The statement referred to follows:)

Our Nation's efforts to control and eventually eradicate tuberculosis have in the past decade shown gratifying results. This success and the degree of attainment thereof, must be measured in light of the very serious problem which still remains. It would be an unforgivable action for those who have the responsibility of determining the course of our Nation's fight against this dread disease to underestimate the very real danger in view of the fact that some 14,000 Americans died from tuberculosis last year and that some 70,000 Americans were known to have contracted tuberculosis, and that there are some 2 million Americans who have or have had tuberculosis living in this country today.

Programs waged against tuberculosis are becoming increasingly expensive. Last year the American public spent some $725 million as a result of their efforts to battle this disease. However, cost alone cannot be our only consideration. We cannot diminish our efforts at this time for the existence of one case in a community is a very real threat to the health of the entire community.

Tuberculosis today is being attacked on a wide front. All aspects of the patient's life are affected. There exists not only the problem of rebuilding the person physically, but emotionally. The patient has the need for care and guidance of trained specialists. The Federal Government, through the Public Health Service, has been a leader in research and the development of techniques to grapple with the changing tuberculosis picture. The Public Health Service, through its

grants-to-States program, has stimulated case finding and prevention efforts within the States. A reduction of funds for this program will result in a corresponding curtailment of the tuberculosis control activities within these States. These funds, which amounted to some $4,500,000 during the fiscal year 1958, support projects and personnel which ordinarily would not have been available. There exists, to be sure, the possibility that the various States would increase their appropriations for tuberculosis control. Unfortunately, many State legislative bodies meet only once in every 2 years and thus will not be afforded the opportunity to appropriate additional funds should the Federal grants-to-States portion of the tuberculosis program be reduced.

Nineteen hundred fifty-nine is by all means not the year to reduce our efforts. Vital projects such as the isoniazid prophylaxis studies conducted by the TB program are now underway, which may give us real short cuts to our goal of eradication of TB. Increased research activities into the cause and cure of TB must be forthcoming lest we accept the existence of TB as a natural hazard to be faced by many future generations. The National Tuberculosis Association board of directors was greatly disturbed to learn that the PHS had requested $1,614,000 less than the amount appropriated for fiscal 1958. Surely, when one considers the size and scope of the TB problem today, and the fact that almost one-third of our population or an estimated 50 million Americans are already infected with living, virulent tuberculosis germs, and as such are a potential reservoir of new cases and new infection, the cutting of funds for program and research is not justified.

The board of directors of the National Tuberculosis Association strongly recommends the restoration of the $1,614,000 in order that the TB program of the PHS be held at a level which approximates the minimum standards which this country should maintain.

The National Tuberculosis Association has followed with great interest the activities of the Institute of Allergy and Infectious Diseases. This group. through projects supported wholly or in part, is devoting approximately $1 million of its $10,800,000 available for research grants during the present fiscal year for basic TB research. Unfortunately, this amount has not been sufficient to cover the many additional research projects dealing with respiratory diseases, including TB, that have requested support from this institute. It would seem logical that a concerted effort in the field of research, coupled with the preventive program of the PHS, would in time reduce the human misery, as well as the exorbitant cost to the public.

The National Tuberculosis Association recommends that the Congress increase by $5 million the amount of funds to be made available to this institute for 1959, and of this increased amount, research relating to TB receive a proportionate share of the funds so available.

The health and welfare of the American Indian has continued to be a major concern of the National Tuberculosis Association. The deplorable health conditions to which these people have been subject have to some degree been improved within the last few years. This improvement has, we believe, been a result of the leadership and the improving program of the Division of Indian Health, PHS. It is also gratifying to know that this program has received the understanding and the financial support of this committee. However, like the tuberculosis problem in this country, improvement is a matter of comparison. True, the health standards of many of the Indians has shown an improvement, but by comparison to the remaining population in this country, the American Indian today is in a situation which approximates our Nation's general health of a half century ago.

The Division of Indian Health, since its transfer from the Bureau of Indian Affairs, has in the area of program activities made commendable progress. Because TB was the major health problem among the Indians, the TB control program was given special emphasis. In the less than 3 years since the transfer, new TB cases among Indians in the United States have dropped 30 percent and the TB death rate 25 percent. In Alaska where the TB problem was particularly acute, deaths from this disease have been cut by 57 percent. The National Tuberculosis Association believes that this is a most impressive record and further believes that the Division of Indian Health is due special commendation.

In other areas of the health program, there are further significant results. The death rate for gastroenteric disease has been cut nearly in half from 50.4 to 26.4 deaths per 100,000. Services to Indians have shown a marked increase. Admissions to contract and PHS Indian hospitals are up 32 percent and the average daily patient load in these hospitals is 13 percent higher than it was at the

time of the transfer in 1955. Outpatient medical services at hospitals has increased 33 percent and outpatient services at health centers has increased 29 percent. There has been a much needed but still inadequate increase in the full-time personnel. The National Tuberculosis Association is pleased to note that, of the 906 additional employees since the time of the transfer, over one-half are in the area of professional, trained, and competent persons.

Should the administration-proposed appropriation for 1959 be approved by the Congress, it would mean that this program will be operating for its third consecutive year at essentially the same level. Our board of directors believes that this would be undesirable in view of the tremendous need for further improvement of Indian health and respectfully requests the Senate to increase the appropriations for program activities, Division of Indian Health, to $45 million for fiscal year 1959.

Our association shares the congressional committee's concern over the lack of progress in the construction of needed Indian health facilities. We have in separate communications brought this to the attention of the chairman of this committee. We urge this committee to facilitate in any way possible the speedy completion of facilities for which appropriations have been made.

Our association commends the House of Representatives for its action in making available funds to implement Public Law 151 of the 85th Congress in order that the PHS can financially contribute toward the construction of joint Indian and public health facilities. Our association urges that the Senate also approve funds for these purposes, but we request that the amount be increased to at least $1 million for fiscal 1959. Many States with Indian populations are ready to use these moneys immediately.

The National Tuberculosis Association is deeply appreciative of this opportunity to present to this committee the above information in respect to matters of vital interest to the health of the American people.

CONTROL OF BOVINE TUBERCULOSIS

Dr. STOCKLEN. Mr. Chairman, first I want to thank you for giving me the opportunity to appear before you. My name is Joseph B. Stocklen, and I am a doctor of medicine.

My official position is tuberculosis control officer of Cleveland, Ohio, and Cuyahoga County.

I am a member of the board of directors of the National Tuberculosis Association and am here at their request to present the official position of this organization, the National Tuberculosis Association, in relation to several aspects of the Public Health Service tuberculosis control program.

Senator STENNIS. I would like to aks you if you knew the late Dr. Henry Boswell, of Mississippi?

Dr. STOCKLEN. Yes, indeed, very much. He was a very great man.

Senator STENNIS. He was a marvelous worker.

Dr. STOCKLEN. Yes. The National Tuberculosis Association knows him very well.

Senator STENNIS. Well, I knew Dr. Bosell very well.

Dr. STOCKLEN. If I may, Senator, I should like to begin my statement by reading portions of an article which I thought were very pertinent to this testimony. This was an article by Paul S. Dodd, a doctor in veterinary medicine. It was published in the Journal Lancet a medical journal published by several of the Midwestern States, North Dakota, South Dakota, Montana, and Minnesota. It appeared in the April 1958, issue. Dr. Dodd had this to say in part, in his article:

Forty years ago, it was estimated that 11 percent of all infant tuberculosis was of bovine origin.

I might say at this point that infant tuberculosis was highly fatal.

At this time—and this is 40 years ago—a member of the Bureau of Am'na Industry made the following statement to a veterinary college class: "We are going to tuberculin test all the cattle in the United States, and we are going to eradicate bovine tuberculosis."

To envision the fulfillment of such a stupendous undertaking at that time was beyond our comprehension. Yet, in one decade, practically all the cattle had been tested at least once. In two decades, 95 percent of the counties were accredited and that meant that we had reduced the incidence of tuberculous reactors to less than one-half of 1 percent. Over 176 million tests had been made and more than 3 million reactors on cattle had been found and slaughtered. In 40 years the disease has been reduced to a minimum.

Now I would like to emphasize this "reduced to a minimum." In other words, there is still some there.

For the last 10 years, the Department of Agriculture has spent about $2 million per year controlling tuberculosis in cattle. It is reduced now to a minimum, but they still have to spend this $2 million.

Unquestionably, many thousands of human lives have been saved by this magnificent program.

Now, I would like to present our problem:

SUCCESS OF PROGRAM

In 1900 the death rate from tuberculosis was 186 per 100,000 population in the United States. The National Tuberculosis Association was founded in 1904, and the program of this agency was founded on the idea that if we could educate the public this infectious disease could be controlled, even though we did not have a medicine for it, if we could teach people TB was infectious. The program has been remarkably successful. Today the death rate is about 8 per 100,000, or down from 186 to 8 per 100,000. The advent of effective drug therapy in 1947 greatly helped our program. However, in the United States we have 40 million people react positive to tuberculin tests. In other words, they have been infected. That's 25 percent of the population. Now you can compare that with the percentage in cattle today and the rate is 0.15 of 1 percent, compared to 25 percent in humans.

We are spending $2 million a year to control tuberculosis among cattle.

Senator STENNIS. Pardon me while I digest those figures. What percentage did you say?

Dr. STOCKLEN. In cattle it is 0.15 of 1 percent and in human beings it is estimated that 40 million, some experts say as high as 60 million which is about 25 percent of the population.

EFFECTS OF CUTS IN PUBLIC HEALTH SERVICE FUNDS

Today the Public Health Service is being asked to accept a cut of $1,614,000 from its last year's budget of $7 million, and that is a cut of 23.6 percent.

In 1951, the Public Health Service budget was $9,800,000. We just wonder whether, with this continued hacking of the budget, a successful program can be carried on, or are we going to accept the thesis that the Public Health Service must have a minimum budget, as Agriculture has, to maintain an adequate hold-the-line preventive

program for human tuberculosis control, such as that conducted by the Department of Agriculture for the control of bovine tuberculosis?

The proposed budget cut will eliminate $1,500,000 from the grants to States for tuberculosis control, a cut of 33 percent.

In my own State, that will eliminate certainly 1, and possibly 2 of the mobile X-ray units that we have going around the State in our case finding program, primarily in the rural areas, where they cannot afford their own units.

Grants to States program is entirely in the field of case finding, and prevention, in accordance with the requirements of the Federal act. There is nothing in here, of course, for hospitalization, for example.

In addition, the proposed budget will cut $114,000 from the Public Health Service direct operations program, a major part of which is allocated to investigation into the action of drugs in the prevention of tuberculosis.

It should be pointed out that the Public Health Service already has conclusively demonstrated that isoniazid—and this is a very fine experiment with isoniazid, one of the major antituberculosis drugs—will drastically reduce the dread complication of tuberculosis in children, which is meningitis.

Before the advent of the drugs, this was 100 percent fatal. With these drugs, after they have received them, a certain percentage of them will recover, as much as 90 percent, can recover.

With isoniazid it can be prevented completely—at least it was in this experiment, which had covered a lot of people.

We urgently request that the appropriation for the tuberculosis control program for the Public Health Service for 1959 be at least equal to that of 1958, that is, $7 million.

IMPROVEMENT IN INDIAN HEALTH

The National Tuberculosis Association has noted with pleasure—and I am sure this committee has the greatest pride in—the strides made in the Indian health program since the crash program was initiated by the Congress of the United States, following the transfer of the Indian Health Service to the Public Health Service in 1955. If I may take just a momemt just to tell you this story. I was in Bismarck, N. Dak., about 4 weeks ago to talk to the tuberculosis association. I met a lady there by the name of Mrs. Paint, who was doing very fine work on the Standing Rock Reservation, which is mostly in South Dakota but partly in North Dakota. She did not know me but I asked her: "What has happened since this transfer and since Congress has appropriated more money?"

She said, "It has been marvelous. It increased the health facilities and increased the health services to the Indians; but we need more."

She was very impressive. I thought you would like to know that.

For example, these are some of the things that happened since that time, and I am going to give just three of them, although there are many others. I thought these were outstanding:

The tuberculosis death rate among Indians has dropped 25 percent. Among Alaskan natives the decrease has been 57 percent.

Secondly, there is no longer an Indian waiting for a tuberculosis hospital bed. Three years ago the hospital waiting list was 2,500.

Thirdly, in addition, infant mortality has declined 17 percent, and gastroenteric deaths have declined almost 50 percent.

The Public Health Service has been able to provide needed health services so that admissions to hospitals have increased 32 percent and outpatient service has increased 33 percent.

These services were needed before, but were not available.

INDIAN HEALTH SUBSTANDARD

Despite this, the health of the American Indian is substandard, as compared to that of the non-Indian.

In 1955, the appropriation for program activities for Indian health was $24,500,000. There was a gratifying increase to $38,800,000 in 1957. Under the proposed budget this year, there will be an increase of but $125,000 for this year and a total of only $1,500,000 over a 3-year period.

The congressionally ordered survey of Indian health needs stated that $60 million to $65 million annually would be required to bring the status of the Indian health up to acceptable standards.

Now, we recognize that a $60 million annual program cannot be organized in 1, 2, or even 3 years. However, the present plateau of appropriations indicates that the progress of the program has been placed in jeopardy. The National Tuberculosis Association urgently requests that the Congress appropriate $45 million for Indian health activities for the fiscal year 1959.

In the past year, the Congress passed legislation authorizing the Surgeon General of the Public Health Service to cooperate with non-Indian communities in the construction of joint hospital facilities or rather, joint health facilities to serve both Indian and non-Indian populations.

We believe that this is sound, economical and to the best interests of all concerned. The House approved $750,000 for this program for the coming year.

Our observations indicate that there are a number of projects of the highest priority in which the Indian bed needs are met from zero to only 5 percent. This is what we mean by high priority.

Communities in these areas are ready to proceed with construction of facilities. Indian participation in these urgently needed hospitals will require a Federal appropriation of $1,750,000 under the item of "Construction of Indian health facilities."

QUESTION OF FEDERAL FUNDS

Senator STENNIS. At that point, what percentage is involved with the Indians in this construction?

Dr. STOCKLEN. It will be a total of 100 percent. In other words in those communities the Federal Government has in the past provided Indians with hospitals, paying 100 percent. Now, under this program, for the number of beds, they would use an Indian population base.

For example, suppose they needed eight Indian beds. The Federal Government would contribute 100 percent of the 8 beds; under the Hill-Burton program, they would contribute but a third, of the cost let's say, of the remaining 92 beds out of 100.

Senator STENNIS. Why are not the Indians entitled to share in beds like anyone else?

Dr. STOCKLEN. Sir, I think they should, and I think it is just a question of the economy.

Senator STENNIS. What area of the country are you talking about?

Dr. STOCKLEN. This is in the Middle and Far West. I think these are places, sir, where there are reservations and they do not have their own facilities and are close to a town, and the people living in town and the Indians are living close together. They could use a small hospital with just one doctor who could supply both populations with service, and it would be sound and economical, and yet the Indians do not have the resources to contribute their share, as they would to it if only Hill-Burton were possible.

That is the problem.

I am sure that we all hope some day the Indians will be treated the same as the non-Indians are, both as to industry and as to living conditions and as to being able to settle down in a community and get their share, just like anyone else gets—I am sure we are all working for that.

DISCRIMINATION AGAINST INDIANS

Senator STENNIS. I am for the Indians. We have Indians down in my State and what I am shocked at is the discrimination against them, in some areas of the country, including my area. I am shocked to find that they do not let Indians come into their regular share in the hospitals.

Dr. STOCKLEN. I think this is due to the present setup, the reservation setup. For example, in an Indian hospital, it is my understanding that a white person cannot be hospitalized there unless in case of emergency. So this thing does work both ways.

Senator STENNIS. You think then that this changeover to the Public Health Service was a real step forward?

Dr. STOCKLEN. Yes, sir. I am convinced of it. I think it was wonderful and everyone I have talked to feels the same way.

Senator STENNIS. All right. I did not want to stop you.

Dr. STOCKLEN. That is my testimony, sir, and I thank you very much.

Senator STENNIS. Mr. Downey, do you have anything of Dr. Stocklen?

Mr. DOWNEY. No, sir.

Senator STENNIS. We are very glad to have had you. As a small boy, I worked in a drugstore in a small town where there was a small hospital, and I saw people come there with tuberculosis and cancer and everything else waiting for the doctors, you know, because there was inadequate treatment for them.

Dr. STOCKLEN. It is hard to believe that such conditions existed, but of course, they did exist at one time.

Senator STENNIS. They existed, and even where you did have the facilities you did not have the research. We have made tremendous strides in that direction.

Dr. Boswell started out in Mississippi on a very, very small scale, and the State finally erected an institution there and he was the father of it, and the only head it had from 1912, I think, until his death last year.

Dr. STOCKLEN. He was a remarkable person.

Senator STENNIS. We thank you very much.

THE AMERICAN HOSPITAL ASSOCIATION

STAPHYLOCOCCUS INFECTION

STATEMENT OF DR. AUGUST H. GROESCHEL, SOCIETY OF THE NEW YORK HOSPITAL, ON BEHALF OF THE AMERICAN HOSPITAL ASSOCIATION IN SUPPORT OF ADDITIONAL FUNDS TO COMBAT STAPHYLOCOCCUS INFECTIONS, ACCOMPANIED BY DR. FREDERICK H. WENTWORTH, DEPARTMENT OF HEALTH, COLUMBUS, OHIO

PREPARED STATEMENT

Senator STENNIS. Dr. Groeschel, we are glad to have you here. I have seen you here before and I think you have with you Dr. Wentworth from Ohio. We are glad to have you both.

Do you have a special prepared statement that you wish to insert in the record and then perhaps speak on the highlights?

Dr. GROESCHEL. We do. We would like to submit that statement.

Senator STENNIS. The statement will be inserted in the record at this point.

(The statement referred to follows:)

I am Dr. August H. Groeschel. I am a physician and associate director, Society of the New York Hospital, New York City. I am accompanied by Dr. Frederick H. Wentworth, chief, communicable diseases control, Ohio State Department of Health. We are appearing for the committee on infections within hospitals of the American Hospital Association. On behalf of this association we wish to express our appreciation for the opportunity to discuss with you the problem of staphylococcus infections in hospitals and to urge increasing, to help deal with this problem, the proposed appropriations to the National Institute of Allergy and Infectious Diseases, and to the Communicable Disease Center, Public Health Service.

The American Hospital Association is a voluntary nonprofit membership organization with about 7,000 members, including the great majority of all types of hospitals. Among these are 90 percent of the Nation's general hospital beds. Last year the Nation's hospitals admitted more than 22 million patients. Our primary interest—and the reason for the organization of this association—is to promote the public welfare through better hospital care for all the people.

With your permission, I will briefly describe the problem and the American Hospital Association's serious concern with it. Dr. Wentworth, who is more familiar with the scientific aspects of staphylococcus disease, will elaborate on some of the points I mention. He will also give you examples illustrating the serious nature of this problem. We will gladly answer any questions you may have.

It is clear that there is a worldwide problem of the control of staphylococcal infections. Staphylococcal infections have been extensively reported in England, Canada, Germany, India, New Zealand, and Australia. These infections constitute a problem of special significance to hospitals. Many of this Nation's hospitals have already had serious problems with such infections. All of our hospitals have a potential problem.

There appear to be innumerable strains of staphylococcus capable of producing infections. Many of these staphylococci are susceptible to antibiotics; some are resistant to antibiotics. Infections resulting from the resistant strains constitute the main difficulty. Antibiotic-resistant staphylococci are largely a byproduct of the widespread use of antibiotics which eliminates the susceptible strains of staphylococci and leaves uncontrolled the resistant strain.

Staphylococci have always existed in large numbers and in almost every environment. Antibiotic-resistant staphylococci are now producing infections in increasing numbers. The most obvious examples are infections in the skin of newborn infants and children, in newly delivered mothers, in burns, in incisions made during surgery, and pneumonia in debilitated patients. Staphylococci may also be responsible for infections of the bones, of the nervous system, of the blood, and of other areas of the body.

The problem is of special significance to hospitals because hospitals are clearly the principal reservoir of most antibiotic-resistant strains of staphylococci. Strains from the community at large are generally sensitive to antibiotics. Strains carried by patients on admission to hospitals are less frequently resistant than strains developing in patients in hospitals. Patients who acquire these infections in the hospital are potential spreaders of resistant strains to the community after discharge.

The incidence of this disease is not known, and much too little is known about the organism, the nature of resistance of people to the organism, and its mode of transmission. The effects of environmental conditions are generally unassessed. A great deal of study will be required to provide answers for effective prevention and control of this most serious problem.

This association, as you can understand, is vitally concerned with this most serious problem involving the care of patients in hospitals. The AHA appointed, last December, a committee on infections within hospitals, headed by Dr. Dean Clark, director of the Massachusetts General Hospital in Boston. This committee has concentrated its efforts on the problem of staphylococcal infections in hospitals. They are preparing a report which will be distributed in the next few weeks to the administrators and chiefs of medical staffs of all hospitals. This report advises hospitals of the serious nature of the problem and indicates the best available measures to prevent and control staphylococcal infections.

We have recommended that all hospitals establish committees on infections, if they have not already done so, to devote attention to the education of hospital personnel, to the reporting of infections to the reviewing of hospital procedures, and to the making of epidemiological studies so that these infections may be reduced to the minimum consistent with present-day knowledge.

These committees on infections are advised (1) to establish a system of reporting all infections among patients and personnel, and to keep records as a basis for studying the source of infections; (2) to distinguish, if possible, between infections acquired inside the hospital and those acquired outside; (3) to make certain that bacteriological services, in or out of the hospital, are available; (4) to review the aseptic techniques employed in hospital operating rooms, delivery rooms, and in the treatment of all patients with infection; (5) to establish techniques for following patients after discharge from the hospital (such infections may not develop until several weeks after the patient has left the hospital); (6) to make vigorous efforts to reduce to the minimum consistant with adequate patient care—

(*a*) the use of antibiotics, especially as "prophylaxis" in uninfected elective surgery; and

(*b*) treatment with adrenocortical steroids.

Hospital administration is advised (1) to diligently maintain the cleanliness of all areas of the hospital; (2) to uncover the silent carriers of staphylococcus who may transmit the disease to others; and (3) to institute appropriate measures for the treatment and transfer of carriers of epidemic strains of staphylococci.

We have advised hospitals to initiate or participate in community programs to control infections through cooperation with other hospitals, local medical societies, local health departments, and other groups.

We have asked the Joint Commission on Accreditation of Hospitals, which is the national independent accrediting body which surveys and certifies hospitals, to require all hospitals to have committees on infections and effective programs for prevention and control of infections.

We have advised the Public Health Service that we are willing to cooperate in research in hospitals that they may wish to undertake. State hospital associations are being urged to request health departments to expand their laboratory services to provide proper identification of staphylococci for hospitals. The Hospital Research and Educational Trust, which is the research arm of the association, is developing a research project on the epidemiology of infections in hospitals.

The American Hospital Association wants to encourage investigation, consultation, and surveillance by all health agencies in a position to aid in helping with

the problem. The Public Health Service is already actively engaged in research, education and control measures on staphylococcus infections, but it is clear that much more work has to be done. We have requested them to expand their research, consultation, and laboratory diagnostic services. The Public Health Service through the National Institute on Allergy and Infectious Diseases and through the Communicable Disease Center is, in our judgment, in position to make the earliest start in the expansion of activities for prevention and control of staphylococcus infections.

To our knowledge funds for adequate expansion of activities were not proposed in the appropriations for the Public Health Service for fiscal year 1959. In our opinion at least $1 million of extra funds should be provided the Institute for staphylococcus research. In our opinion, also, at least $500,000 of extra funds should be provided for the Communicable Disease Center for the conduct of field studies, control activities, and to provide additional support to State laboratories. Based on our knowledge of available research talent and facilities, this is a reasonable figure with which to initiate an expanded program.

We urge this subcommittee to consider seriously the request for additional funds to these two branches of the Public Health Service. We believe these funds are necessary to meet the immediate threat faced by all of our hospitals and their patients.

With your permission, Mr. Chairman, I would now like to ask Dr. Wentworth to elaborate on some of the points I have made and to describe to you actual epidemic situations which will illustrate forcefully the serious nature of staphylococcal disease.

ADDITIONAL FUNDS FOR RESEARCH

Dr. GROESCHEL. We realize, too, that the hour grows late and there are many people you wish to hear, and we will try to hit the high spots, and if there are any questions that we can answer we should be only too happy to answer them.

I am Dr. August H. Groeschel. I am a physician and associate director, Society of the New York Hospital, New York City. I am accompanied by Dr. Frederick H. Wentworth, chief, communicable diseases control, Ohio State Department of Health. We are appearing for the American Hospital Association and that association's committee on infections within hospitals.

In behalf of the association, we wish to express our appreciation for your courtesy and consideration in hearing us this morning and also for the opportunity to discuss with you the problem of staphylococcus infections in hospitals and to urge that you increase the proposed appropriations as follows:

First, $1 million additional to the National Institute of Allergy and Infectious Diseases, to be earmarked for research in staphylococcal infections and, second, $0.5 million additional to the Communicable Disease Center to be earmarked for work in connection with staphylococcal infections, to include epidemiological field studies, control activities, to provide additional support to State and health departments, for the expansion of laboratories, and for the training of additional laboratory technicians in the special work of staphylococcus bacteria as far as typing.

As you know, the American Hospital Association is a voluntary, nonprofit membership organization with about 7,000 member hospitals in this country, including the great majority of all types of hospitals. We have about 90 percent of all the general hospital beds in the country and about 22 million patients are admitted to our hospitals every year.

The primary interest of these hospitals and of the association is to promote the public welfare through better hospital care for all of the people.

PROBLEM OF INSPECTION IN HOSPITALS

With your permission I will briefly describe the problem of staphylococcal infections within the hospitals and the American Hospital Association's serious concern with it. Dr. Wentworth, who is more familiar with the scientific aspects of staphylococcus diseases, will elaborate on some of the points I mention. He will also give you examples illustrating the serious nature of this problem. We will gladly answer any questions you may have.

There has been very real increasing public awareness of this problem within the past year and within the past several years. It is rather interesting that this morning on the newsstand we picked up a Saturday Evening Post under the date of May 17 with an article, "The Hospitals Fight Their Toughest War." It goes on to say, "A tough penicillin resistant germ haunts hospitals. As a result, some patients pick up an ailment worse than the one they come in with."

That, sir, is precisely why we are here this morning. This has now come from hospitals and doctors and it is now in the public domain and is a matter of real public concern. This is not the first of these articles. It is perhaps the fourth or fifth in the widely read journals.

Now medical awareness has been increasing for at least 3 years. Dr. McDermott, whom you know, and Dr. Gail Dack, who has appeared before this committee before, have both discussed this problem with you, I believe, in 1955 and 1956 and again in 1957. It is a problem of hospitals everywhere. It is not just in any State. It is not just in this country. It is in the whole world. There have been outbreaks in Europe, England, Asia, and in Africa. The realization of the extent of the problem medically has only really crystallized within about the last 18 months. Committees and various organizations, the American Medical Association, the American Hospital Association, the American Public Health Association, and others have been working on this with the best brains they can get. They are only now in a position to crystallize their thinking on it.

The individual hospitals that have suffered with this problem, and I might say that practically every hospital I know of, including the one with which I am connected, have had the problem, but the individual hospitals have been working to do their best to overcome the thing as far as their own individual problems are concerned. In addition to that, the hospitals collectively, through the American Hospital Association, have set about a very ambitious program to do what they can to meet the challenge of this very real problem. They organized a committee, the members of which, I believe, are known to you, Senator.

WORK OF COMMITTEE WITH HOSPITALS

This committee has worked together with officials of the United States Public Health Service to see what can be done by the hospitals collectively to combat this problem. They have initiated a program which is wide in scope and should be productive of great improvement. Shortly, they are going to distribute a bulletin outlining as much as we know about this, and we know far too little, but outlining as much as we know about the prevention and control of staphylococcal infections in hospitals and we are going to publish it in the hospitals and the journal of the American Public Hospital Association.

Also, we are going to ask the journals of other organizations to publish it too. We are going to try to secure financial aid to sponsor the development of training films to be used in training personnel in hospitals on how to control these infections. We are urging all hospitals to appoint committees of experts within their own institutions to work on this and to develop ways and means locally of combating the thing.

We have requested the Joint Commission on Accreditation of Hospitals to require that all hospitals have a committee on this particular thing to work within each hospital. The committee appreciates the fact that the Public Health Service, through its facilities and expert staff, particularly through the National Institute of Allergy and Infectious Diseases and the Communicable Disease Center in Atlanta, is in a unique position to obtain information, to conduct research and to make recommendations to minimize infections in hospitals.

REQUEST TO PUBLIC HEALTH SERVICE

It therefore voted, this committee, just recently at the meeting on April 23, to urge the Public Health Service to expand its consultation, laboratory, and diagnostic services and research on control of infections acquired in hospitals and to urge, if necessary, the appropriate committee of Congress to appropriate sufficient funds for this purpose.

We are asking State hospital associations to request their health departments to expand their laboratory services. We are asking State and Territorial health offices to report and expand health departments. I indicated the fact that many individual hospitals are working separately to resolve the specific problems of staphylococcal infections in their individual institutions. I have also outlined, as quickly as I could, the substantial program which hospitals throughout the country are in the process of initiating, working collectively under the aegis of the American Hospital Association to deal with this problem. Additional effort is needed of a kind which neither individual hospitals nor the American Hospital Association are organized, staffed, or equipped to undertake. This effort is in the area of basic research. You have heard so much, I suspect, it rings in your mind practically all the time, but we are back to it again. The basic research is terribly important in the solution, if we are to get it, this problem. We also need epidemiological studies, control activities, consultative services, grants-in-aid to State health departments for enlargement of State laboratories to perform the special tasks that are necessary to isolate these bacteria.

NEED FOR ORGANIZED EFFORT

This additional organized effort is needed acutely. Believe me, Senator, in our opinion, our considered opinion, it is needed now and it is critical and it will be needed more urgently in the months which lie immediately ahead. The need transcends State boundaries. The need is national in scope. Under such circumstances, however, hospitals, individually and collectively, look and will continue to look to the organizations within the United States Public Health Service, the National Institute of Allergy and Infectious Diseases, and the Communicable Disease Center for help, organized and effective help, and we believe that it is entirely appropriate that they should do this.

I do not want to take up any more of your time. I think I have tried to indicate the general scope of the problem. You have heard of staphylococcus. It is a terrible thing. Dr. Wentworth here has had individual and personal experience of the ravages of it in Ohio. If you would care to ask any questions or care to comment on it, perhaps he can contribute to the discussion.

Senator STENNIS. Doctor, we would be very glad to hear you and then we might have some questions.

Dr. WENTWORTH. I am Dr. Frederick H. Wentworth, a physician. I am the chief of the communicable disease control division of the Ohio Department of Health. I have been asked to discuss with you, on behalf of the American Hospital Association, this staphylococcus problem. Dr. Walsh McDermott and Dr. Volker have presented, in the last 3 years, this problem to you. Actually, I think this might be considered an extension of our concern about this.

The problem is getting worse. I speak as one now who has had 2 years' experience in assisting hospitals with the problem. We cannot do an adequate job at the present moment. We do not know enough about the organism and we do not have enough resources to apply what we do know.

The problem within the hospital is a very severe one and it requires our concern, but I think there have been some developments in the last year that make this even more of a problem. We now know that the organisms responsible for this problem are different from the ones we generally see in the population.

ORIGIN OF INSPECTION

The best judgment at the moment is that these organisms originate in hospitals through no fault of the hospital. It is most likely associated with the use of antibiotics, but this point is far from clear. But these strains differ in several respects from the strains of the bacteria that we find in the general population. Now the point is that once a patient, most usually infant patients and newborn nursing, become infected in the hospital, again through no particular fault of the hospital, and then are released into the general population, they carry this strain for a long time. They introduce it into their own family group.

Senator STENNIS. Just what do you mean "strain" now?

Dr. WENTWORTH. The bacteria, the particular type of bacteria, the hospital bacteria that differs from the general bacteria in the population. It differs in respect to its ability to cause epidemic disease and it differs in the respect of its seriousness. These particular bacteria, hospital bacteria, are introduced then into the family groups and our particular work in Ohio has been concerned with what happens in these family groups. We know now that it persists there for actually years. We have good documentation now of up to 18 months and some fragmentary evidence on 2½ years of the persistence of the organism within the family group in a variety of diseases, such as pneumonia, and other types of staphylococcal diseases within the family group. We do not have at the moment any real adequate means of eradicating the organism from the family groups. It disappears from some families for reasons which we do not understand. In others, it remains at least for the period of observation that we have conducted.

This is our first, I think, real concern. The second concern is that while this is occurring we have been able to feel, at least in Ohio, and I think it is most likely a general feeling, that if this goes uncontrolled there will be a general decrease in confidence on the part of the public in their hospitals and this is extremely important. I think these two points together make this a much more important problem than the fact that some patient may become infected by staphylococcus in a hospital, and that is bad enough, but these other two points are the real important ones and the frustrating thing at the moment is, we are truly not capable of controlling the situation.

CONTROL STUDIES

We do know, from some small control studies, that if we do control the situation in the hospital that this is immediately reflected in what is happening in the families of the patients that are discharged from the hospitals. For example, in one hospital epidemic where we studied it, 25 percent of the families whose infants were born during the epidemic developed staphylococcal diseases after the baby was sent home. After that, we were able to control that particular epidemic and during the ensuing period, only 2 percent of the families whose babies went home developed the same type of illness. This would suggest that the control of the hospital situation will be reflected in a control of the disease in the community.

AREAS OF WORK NEEDED

I would think, from our experience in Ohio, that we should work in three areas: First, in basic research, as has been pointed out; secondly, we need help in being able to apply what we now know and this is primarily in the field of laboratory assistants to deal with this problem in these particular hospitals and these particular strains are very time consuming. It takes 10 or 12 days to identify these strains. They are difficult to identify. There is a lack of trained personnel in the field. We need help in this regard.

PLACEMENT OF TRAINED PERSONNEL

Senator STENNIS. Now at that point, where would you put these trained people?

Dr. WENTWORTH. I believe there are two things in this area. First, the Communicable Disease Center laboratory should be expanded and become a real reference laboratory, a training laboratory for the country in this regard. Then, they should be in a position to offer training courses for State personnel. I think there must be funds to help these States to enlarge their laboratory services and to make CDC a place where they can get the proper training.

There is a real good precedent for this, I believe, in the way the Congress handled the polio problem and the influenza problem. Both of these, at least from the State point of view were handled very nicely, where money was put into the State laboratory and then reference services and training services were set up at CDC. I believe that the same type of program could work very well here. That may be the entire answer.

We found out in Ohio, even from the State level, we cannot handle the total load. Just in the last 18 months we have done 20,000 specimens for 67 hospitals. That is 67 out of the 200 hospitals in Ohio and that work is increasing.

Twenty-three of those were since January 1. We are now setting up a special laboratory with the assistance of Federal moneys in Cincinnati to handle their special problem. We anticipate a similar need in the city of Cleveland.

Certainly, the service cannot be rendered from a single Federal source. It must be at least at the State level and perhaps even lower than that.

NEED FOR BASIC RESEARCH

So that we need basic research and we need assistance to apply what we know. I think CDC's laboratory facilities could well be expanded, as well as their field services, because the States will need consultation on this.

Thirdly, the States need direct assistance to expand their own laboratory services and their own field services.

Senator STENNIS. You need direct money assistance?

Dr. WENTWORTH. Yes, sir; along the lines, I believe, that were carried out with the polio problem and the recent influenza epidemic.

We certainly need consultation for CDC. There is no question about that. We need it in the training areas. But the service to the hospital can probably best be rendered from at least the State level and perhaps even from a more local level.

Senator STENNIS. All right, is there anything else? You made a very interesting statement here. I was just thinking of the far-reaching effects of this development, that you have been wrestling with it very briefly, however, you have pointed out the rate of your progress and the potentialities here.

Dr. WENTWORTH. Yes, sir.

DEVELOPMENT OF TREATMENT-RESISTANT STRAINS

Senator STENNIS. You say in your statement, Doctor, that antibiotic-resistant staphylococci are now producing infections in increasing numbers. As to that staphylococcus, you have not been able to find any antibiotic that would reach it. Is that what you mean?

Dr. WENTWORTH. That is one of the characteristics, Senator, that differentiate these strains from the strains in the general population, that they are resistent to one or more of the antibiotics. It does not mean they are resistant to all of the antibiotics.

Senator STENNIS. Do you think it is due to the fact that something originated in the hospital there?

Dr. WENTWORTH. I think it is natural that this should occur in hospitals because that is the place that antibiotics are most needed and most used. We are seeing more resistant strains in the general population. I think there will be come generation of them in the general population; but the bulk of them, we feel, at least in our best judgment, at the moment, will be generated in the hospital and then be slowly filtered into the general population through the discharged patients.

Senator STENNIS. Well, I do not know I support these programs, but the hospitals are waiting on the Federal Government to go even

so far as to supply the technicians and the program and furnish the money for the program at the State level. I do not know about that. If we are going to do that, that will just about cover everything to be done. There would not be much left for the States to do.

Dr. WENTWORTH. What the hospital association is asking for here is help. You see, I work at the State level in the State health department. We see the problems in the hospitals and they request us to help them and we try to do it. We can only do a certain amount. They are not set up to be able to do the vast amount of work that has to be done and they require really organized public health assistants. That is what I mean.

Senator STENNIS. Mr. Downey, where does this come in in the program now? Do you have the information you need to put this into the record? I suppose you do.

Mr. DOWNEY. Senator Hill asked Dr. Robert Anderson, the head of CDC in Atlanta about this problem for which these gentlemen recommended an additional one-half million dollars. I also talked to Dr. Andrews, the head of the Institute of Allergy and Infectious Diseases, and he indicated a need for the additional funds.

Senator STENNIS. Then you think this has been covered from your viewpoint on the entire subject?

Dr. WENTWORTH. Yes, sir.

Senator STENNIS. We thank you very much for coming in. We are delighted to have had a chance to hear you gentlemen.

NATIONAL INSTITUTE FOR ALLERGY AND INFECTIOUS DISEASES

STATEMENT OF DR. WALSH McDERMOTT, THE LIVINGSTON FARRAND PROFESSOR AND CHAIRMAN, DEPARTMENT OF PUBLIC HEALTH AND PREVENTIVE MEDICINE, CORNELL UNIVERSITY MEDICAL COLLEGE, NEW YORK, N. Y.

PREPARED STATEMENT

Senator STENNIS. Dr. McDermott is our next witness. Doctor, we are very glad to have you here this morning. You are one of the old reliables around here.

I notice you have a prepared statement, Doctor. We bid you a special welcome and if you wish to read your statement, you may, or you may put it in the record and then make comments on the highlights.

Dr. McDERMOTT. With your permission, Mr. Chairman, I would like to submit it for the record and simply comment on the highlights.

Senator STENNIS. I believe that is the most effective way. That will be inserted in the record at this point.

(The statement referred to follows:)

NATIONAL INSTITUTES FOR ALLERGY AND INFECTIOUS DISEASES

As the committee knows, a small group of us first started appearing some 3 years ago in support of budget increases for the Institute of Allergy and Infectious Diseases. Our theme in 1955 and each year since, has been: (1) that the large

group of diseases caused by microbes represented a very major health problem which had been previously neglected in terms of research support; (2) that diseases caused by microbes would continue to be with us and be a problem because just like the farmer's problem with weeds and insects, once the scientists get one set of microbes under control, another set gets the chance to emerge as a problem; and (3) that a major problem in the United States was the infections caused by the common microbes we all carry around within us much of the time—the staphylococci of boils and abscesses, the microbes of the intestine, and in the case of our adult population—the bacilli of tuberculosis; and (4) that a major research effort should be made in the field of allergy and infection to develop the basic information leading toward the development of effective ways to restore bodily defenses against these common microbes—in other words—a vaccine program against staphylococci, tubercle bacilli, and the microbes from the intestinal tract.

In looking back over both the 3 previous year's testimony and the committee actions, it is gratifying to note that the importance of the staphylococci in this problem of "the common microbes" was especially stressed each year since 1955 and that the committee took cognizance of this fact in its actions. Indeed in 1956 the committee voted an increased appropriation for the Institute of Allergy and Infectious Diseases with the recommendation that up to a million dollars be expended in research at all levels leading to the development of vaccines against these common microbes especially staphylococci and tubercle bacilli. And, last year a further increase was approved.

In short, Mr. Chairman, at the risk of appearing immodest, it seems to me that the scientist witnesses have done a good job of keeping the committee informed as to where are the beginning major problems and the committee has recognized these problems as problems and make it possible to get research programs started in this field of staphylococcal, tuberculous, and the other common microbial diseases.

Now we are asking the committee to do a lot more. We believe that the program in allergy and infectious diseases that has shown this steady expansion during the past few years is now ready to assume the really big expansion that is so very necessary if we are to keep up with the threat of allergy and infection to our Nation's health.

We believe that an appropriate amount for such an increase would be a sum of $5 million above the budget estimate for the extramural grants program of this Institute and an additional million for a much-needed expansion of the traineeship program in allergy and infectious diseases.

As the committee knows, we have considered this "common microbial infection" disease problem as being all one package from the research standpoint—a package including staphylococci, tubercle bacilli, and the microbes of the intestinal tract. Other witnesses this morning are planning to report on the staphylococcal situation so that I would just like to make a few remarks on the "basic studies in tuberculosis vaccine" program.

Since the committee's action 2 years ago, in getting this program started, some 8 investigative groups have been able to inaugurate or considerably expand programs in this field. The goal, as you will recall, is to develop a standardized, nonliving vaccine which can afford significant protection against tuberculosis without spoiling the tuberculosis skin test as a diagnostic tool. Several different approaches are being employed by the research groups involved. In experimental animals it is now clear that with certain of these approaches, a killed vaccine will work and there is some evidence that the vaccines will work without spoiling the tuberculosis skin test in the animals. I would judge that it will be during the coming year that the question of the relation of these killed vaccines to the skin test in humans will receive its first testing. If that hurdle is successfully surmounted, one or another of the vaccines should be ready for clinical trial.

This program is proceeding with a maximum of interchange among the various investigators and both in 1957 and last month the Institute of Allergy and Infectious Diseases assembled the investigators to pool information and results.

At the present time the greatest bottleneck in this program and indeed in the staphylococcal program as well is the very inadequate facilities generally available in this country for housing mice and guinea pigs infected with tubercle bacilli, staphylococci, and the other infectious agents. Indeed, the committee might well consider a special appropriation of $1 million or $1.5 million to the Institute to enlarge and properly modify animal rooms throughout the country so that there would not be the long delay in conducting each separate experiment in this subject.

The need for a tuberculosis vaccine which does not affect the tuberculosis skin test is getting more pressing all the time because of the growing reluctance of people to submit to periodic chest X-rays because of their fears of radiation hazard. (As the committee knows, one of the distinct disadvantages of the BCG vaccine is the fact that it spoils the tuberculosis skin test as a diagnostic tool.) In addition to the increased importance of the tuberculosis skin test as a case-finding tool there is a great need for better methods for finding out when a person with known infection is actually having significant active tuberculous disease.

One of our biggest problems in protecting health in this country is to find means whereby the technical advances can be brought to bear on the patients for whom such treatments are necessary. We now have excellent treatments for tuberculosis from the technical standpoint, but there are still large numbers of persons going around with active tuberculosis who are unaware of this fact and whose disease may not be so easy to detect on a mass basis. If a simply blood test analogous to the one for syphilis could be developed, it could obviously be applied on a mass basis throughout the country and would lead to a very much greater degree of control of tuberculous infection than is now the case.

One of the groups active in the vaccine program, the group in Dr. Youmans, laboratory at Northwestern, have directed themselves to this point and have made some quite exciting preliminary observations. The work was done by Dr. Parlett along with Dr. Youmans and their associates. Investigators have been working on this subject for many decades, but thus far the methods for testing substances in the blood which might appear there in response to tuberculous infection have not been very successful.

What the Northwestern group did was to study the field at a most basic level and adapt a method which had been developed in basic research in allergy and immunology in France and in Sweden to application on this subject of the diagnosis of tuberculosis. In any test of this sort, it is not likely that one would get absolutely 100 percent effectiveness. Nevertheless, the results of Dr. Parlett's and Youmans' from that standpoint are most impressive in that only 4 of 53 specimens of blood from patients with active tuberculosis failed to react positively in their test. Conversely, of 38 perfectly well persons, only 2 gave possible positive reactions and in both patients there was some reason to believe that active tuberculosis was present although hitherto unsuspected.

I present this work simply as an example of the way basic research in the field of allergy and immunology, having nothing to do with a particular disease such as tuberculosis, can be picked up, modified, and then applied to become a very practical tool in our detection of patients with active pulmonary disease. And it is in the area of finding the patients today that is the important one, for we have excellent treatments once the patients are found.

GENERAL RESEARCH AND SERVICES

This example of a development in basic research which is now being applied practically with considerable promise brings me to the second item for which I would like to make a plea for an increase, namely the National Institutes budgetary item termed, "General research and services." As the committee knows, there is much basic research being conducted in the individual categories Institutes in Bethesda. By the same token, the Institutes are understandably under the charge to conduct basic research, insofar as this can be done, within the framework of their particular field of interest such as heart, cancer, allergy, infectious diseases, and so forth. But basic research itself cannot be so categorized, and a development in one field may have widespread application in others.

In order to meet this need, therefore, there has been right from the beginning of the Institutes program a separate branch known as the general research and services program. This is a purely extramural program conducting no research at Bethesda, but simply supplying support for scientists throughout the country who have some interesting questions that they wish to attack. The range of subjects attacked under this relatively small program is quite wide and goes all the way from studies in experimental methods in the use of mathematics in the health field to studies of what happens to people involved in automobile crashes on our highways to the studies conducted by our own group on how to deliver modern medicine in remote primitive areas such as those inhabited by our Indian population. In short, this general services program is the program that more or less starts out into new fields. Whenever a development comes from this and it is clear that the development can be utilized in one of the categorized Institutes, the project is transferred there and the general research grants program

goes on to ther things. Thus, it really supports a wide range of pilot studies seeking to make enough of a breakthrough here and there to provide appropriate basis for further scientific study. Because of the wide variety of subjects supported by this program, it receives very little publicity as such, and in my opinion has continued to receive inadequate support. Indeed, the council of which I am a member reviews the applications in this field and we are constantly finding ourselves in a position of withholding support from promising exploratory activities simply from lack of funds. Accordingly, I am making a plea for an increase of $10 million for this item of "general research and services."

DIVISION OF INDIAN HEALTH

I mentioned that one of the projects supported by this uncategorized research grants program of the general services program of the National Institutes had to do with the studies of our own group, the New York Hospital-Cornell Medical Center in the field of Indian health. This is a research project in my department to which I devote a great deal of my own personal attention as an investigator and through working in this field, I have acquired familiarity with the health problems among the United States Indian and the problems faced by the Public Health Service in their responsibility for Indian health. I have mentioned this in previous appearances before the committee and have pointed out that although most of my work is done at the New York Hospital-Cornell Medical Center in New York City, nevertheless, I spend approximately 1 week out of every 5 or 6 in the heart of the Navaho Reservation in northern Arizona and New Mexico. As a consequence, I believe I am one of the few people active in university medical research who has at the same time a working knowledge of the Public Health Service program and the problems in Indian health. Indeed, our own experience antedates the responsibility for the Public Health Service in this field in that we are now in the seventh year of conducting a research program in cooperation with the Navaho Tribe.

On the basis of this extensive experience, both before and after the United States Public Health Service assumed the responsibility for Indian health, I can state that the Public Health Service is meeting this formidable responsibility in a most creditable way, but that they need very much more help than they have been getting or is contemplated in the budget estimate. Moreover, I have some familiarity with all of the general programs of the whole Public Health Service and I can assure you that the Division of Indian Health is without question up against one of the toughest assignments faced by any of the physicians in the entire United States Public Health Service. This applies to both the men and women in Washington and those situated out in the field.

The basic problem stems, as we all know, from the fact that the problems of our Indian populations are national problems, but happen to be localized geographically into a few relatively remote areas principally in the southwestern part of this country. As a consequence, very few of us as citizens and educators have any familiarity or understanding of the problem, nor do we devote a very great amount of our thinking to it. Whenever there is a situation like this, involving human beings, particularly rather colorful human beings, as in the case of the United States Indians, there then grows up a whole body of amateur experts who approach the problem with strong emotional bias and report in an emotional fashion. As a consequence, it is extremely difficult for the rest of us to get any sort of a balanced understanding of the many aspects of the problem and what should be done about it. In short, unless one has been there and faced these problems in the field, it is almost impossible to visualize the formidable nature of the health problem.

To take just a few examples, when the administration of the Division of Indian Health make a plea for more funds for the housing of personnel on the Navajo Reservation, one might get the impression that some "rundown" housing existed, but that it might not seem too attractive to medical personnel. In actuality, no housing at all, not even a tent, exists in many places on the reservation where if a small health facility could be set up and manned, the amount of disease could be drastically lowered just by using simply everyday technics.

For, it is primarily through an efficient field health program that the health status of the Navajo and many of the other United States Indian tribes will be made comparable with United States rural health in general. In a field facility, i. e., a clinic operating for nonhospital patients is the proper base from which preventive measures against disease can be applied most effectively. As medical programs go—field programs are relatively inexpensive. By the same token, in order to set up and operate such programs the Division of Indian Health needs

considerably more money than is now available to it. It needs these funds for salaries, for construction of field facilities, for radiotelephones, appropriate X-ray facilities and similar equipment.

It is understandably difficult to recruit first-class medical and nursing personnel for work in lonely outposts. Even so, the Division of Indian Health frequently succeeds in lining up a first-class physician or nurse only to lose them either because there is no housing or because there is no salary available in the budget.

The Navajo-Cornell field health project receives considerable support from the Division of Indian Health as well as support from the National Institutes of Health, private foundations and the Navajo Tribe.

Today, the Cornell group is in the position whereby we could appreciably expand our own contribution to a field program by supplying subprofessional medical personnel carefully trained on our project. Yet the Division cannot take advantage of this offer on our part, because they have insufficient funds to supply the physicians or nurses for an expanded program.

Considering the formidable nature of the problems, the fact that the Division of Indian Health has been able to accomplish as much as it has accomplished within the past 3 years is very much to its credit, but it needs much more help before a really satisfactory program can be maintained. It is for these reasons that I would strongly urge the committee to consider making a $5 million increase above the budget estimate for the program of the Division of Indian Health for the coming year.

Finally, I believe it should be noted that in one of the most difficult situations—that of the Navajo—the tribe itself has been quite active in seeking to improve the health of the people. I believe, Mr. Paul Jones, the Navajo Council chairman and Mrs. Anna Wauneka, the chairman of the tribal health committee appeared before this committee earlier this week in support of an increase in this item of the budget. Moreover, the Cornell Medical College work out there has received partial support from annual grants made by the Navajo Tribe to the university and when the grants were started 6 years ago, the tribal resources were quite meager. Indeed, we believe that the Navajo-Cornell enterprise is a pattern for the future in that it represents a collaborative effort on the part of the people most concerned—the tribe—and a university, the Division of Indian Health, private foundations, and private industry. This pattern cannot be applied more widely, however, unless the support for the Division of Indian Health itself, can be considerably increased.

PILOT STUDIES

Dr. McDermott. I am Dr. Walsh McDermott, Livingston Farrand professor and chairman, department of public health and preventive medicine, New York Hospital-Cornell University Medical Center, New York City, N. Y., and I am a member of the National Advisory Health Council and editor of American Review of Tuberculosis.

I am here, Mr. Chairman, to make a plea for three items in the Public Health Service budget. The first is a little-known item known as the "General research grants program," which, as you and the committee know, has to do with basic research in the National Institutes of Health, but which is not associated with any particular institute. Because this is not associated with any particular institute, it does not have as many friends to speak for it as it should.

This program is one that does the pilot studies in research, and supports that throughout the country in having a wide range all the way from mathematics to health and then to what happens to people in automobile accidents and even to our own research, field research in the field of Indian health. Once a project really gets going and breaks through on this, it is then transferred to another institute.

I would like to request a minimum additional amount above the budget estimate of at least $5 million on up to $10 million, which could be properly used in this program.

INDIAN HEALTH PROBLEM

The second item of the Public Health Service budget which I would like to mention is the Division of Indian Health.

As you know, Mr. Chairman, I work in the university in New York City, in the laboratory there. I spend at least 1 out of every 5 or 6 weeks in a project of ours right in the middle of the Navajo Reservation in northern Arizona, so I happen to be one of the few people engaged in university research, on the one hand, who is familiar with some problems in Indian health and what the Public Health Service is doing about it at the same time.

In connection with your question to a previous witness, I would like to make that point that our own work out there in that Navajo Reservation has been substantially supported financially by the Navajo Tribe ever since 1952 at a time when their tribal resources were quite meager. They are better now, but they were quite meager then. There is no question about the fact that the Indian health problem is one of the most formidable problems the Public Health Service has to face.

You have heard something about the hospitals being needed. Field programs are also needed and field programs are terribly hard things to get across. They definitely need the $5 million above the budget estimate which the previous witnesses have requested.

I have with me simply three photographs here of our field program in operation out there that I will give to you. There are nurses giving injections there, as you can see. You can see the vastness of the territory and you can see the type of transportation that is available, namely, the horse, and here are three roads over which that nurse has to travel to get to the people.

Senator STENNIS. Is she an Indian? This nurse?

Dr. McDERMOTT. No. She is not. She is a girl from Illinois, as a matter of fact, Senator. She is a remarkably dedicated person. When we first went out, she had 10,000 square miles to cover and 10,000 people.

Senator STENNIS. At this point, let me surrender the Chair to the chairman, Senator Hill.

Senator HILL. Dr. McDermott, I welcome you. I have seen you here before and you have always been most helpful. You may continue.

Dr. McDERMOTT. That picture there will show how difficult it is to get a field program going and that is one of our problems. I can say that the administrators of the Indian health program, both in Washington and out in the field, are dedicated men and are doing a most creditable job, but they have a long way to go and they need much more supplies, much more financial support than they are now getting, and I strongly endorse the recommendation that the budget increase of $5 million above the budget estimate be approved.

Senator HILL. I might say we had now two very interesting witnesses here on Monday. They were both Indians. They certainly made splendid presentations referring to just what you said here about the need for strengthening and expanding and improving the situation.

Dr. McDERMOTT. Yes, Senator, I was just telling Senator Stennis that that group made financial contributions to our own research and indeed last Thursday I had to appear before them.

Senator HILL. You were before them asking for some funds?

Dr. McDERMOTT. I was before them asking for some funds for our research, which we did get.

Senator HILL. Well, they did make some very fine statements, I mean Mr. Jones and Mrs. Wauneka, the Indian witnesses, and they made a splendid impression on me.

ALLERGY AND INFECTIOUS DISEASES

Dr. McDERMOTT. With your permission, I would like to turn to the third item, namely, the Institute of Allergy and Infectious Diseases. As you and the whole committee know, since 1955 a group of us have been coming down here making a plea for this Institute. Our theme has been that the diseases of allergy and infection taken as a package range up with accidents, cancer, and heart disease as major public health problems in this country, that they are going to remain with us, because when you get rid of one infection you get another, that the biggest problems we faced in recent years has been our own microbes, staphylococci, and bacilli from TB, the bacilli which 40 million of us carry around, that the sensible way to attack this problem was to learn all we could about the basic mechanics involved with a view to developing vaccines against these common microbe infections.

In looking back over the testimony of those past 3 years and the committee action, I can see, at the risk of immodesty, Mr. Chairman, that the scientific witnesses have done their job in informing the committee and the committee has done its job in taking action and defining what problems were problems.

In 1956, when the committee and the Congress granted an increase above the budget estimate in the committee report, it stated especially that up to $1 million should be used in this field in staphylococci and tuberculi and the others. Other witnesses, who are here today, have testified and will testify on staphylococci, so I will confine my remarks for the the remainder to the program of tuberculi bacilli and the vaccine problem there.

NEED TO KEEP TUBERCULOSIS TEST

As a result of the action 3 years ago, some 8 groups of investigators were able to either start in or expand programs in this field. Several different approaches have been chosen to work out. Each of them has shown certain benefits and certain demerits. I can say at this time that it is quite clear that a nonliving vaccine, that is, a killed vaccine, which is of quite reasonable effectiveness, has been developed at the animal level. Now our goal, as the committee knows, is to try to develop a vaccine which does not spoil the tuberculosis skin test as a diagnostic tool, because it is more and more important that we keep that tuberculosis test as a diagnostic tool. It is more important today than ever, because many people are getting reluctant to have their children and themselves X-rayed frequently. Rightly or wrongly, that is the way they feel. The skin test is getting to be a very much more important thing. So if we could develop a vaccine which would not do this, it would represent an immense step forward.

The indications from the animal work are quite promising in this respect, that certain of these extracts now look as if this can be done.

We expect, within the next year, to demonstrate, one way or another, whether these products effect the skin tests in units. If they do not, then we are on our way. If they do, we will have to go back and start with another approach.

The biggest bottleneck in this program is the lack of facilities for the care of tuberculous animals and animals with these staphylococci, the lack of facilities to protect personnel. We have to have rather special animal rooms for working in this field with mice and guinea pigs and if an increase in the allergy and infectious diseases budget above the $5 million we are already requesting could be made in this field it would be most helpful.

Senator STENNIS. How much did you say there, Doctor?

AMOUNT REQUESTED

Doctor McDERMOTT. I would like to request $5 million for the extramural grants program of the Institute of Allergy and Infectious Diseases, another $1 million for the traineeship program, and $600,000 for the fellowship program. But, speaking, Mr. Chairman, about the lack of animal room facilities. I would like to even see more, if possible, put in there. I believe that can be done by the same method, because what is required is not the building of new animal quarters but the modification and the making safe of the animal rooms which exist so that more work can go on in staphylococci and tubercul bacilli and these other things.

TUBERCULOSIS TESTS AND VACCINES

While on the subject of skin tests for tuberculosis and tuberculosis vaccine, one of the programs in this vaccine program, one of our doctors has done a very interesting work in taking basic research and making it apply in the nature of a blood test in tuberculosis. What they have done is very simple and yet quite exciting in its preliminary form.

As the chairman and the committee well know, in addition to a skin test, it would be very nice in tuberculosis, and indeed in all of the diseases today, if we had good blood tests that would tell us when the disease is present in an active form and of course then it is telling us we have trouble. What Dr. Parrot and Dr. Youmans did was to take a basic research development from the field of allergy and in allergy the allergists know that our blood is in a sense really a historical record of a lot of things we have been exposed to in our lives. We build up antibodies, and they are highly specific things so that one can tell, from a person's blood, whether he has had an experience with poison ivy or this or that, or with certain foods and with a variety of infections. All of these things are together in the blood in a large number.

What the development was in this allergy was to take simply an inert material, like blotting paper, and run in the patient's blood from one end of the thing and then run in whatever specific thing one wished to test for in the other. If that patient and his blood had had experience against the thing you run in, the two would clash together, fall out, form a band, and one could definitely say that this patient has had extensive experience against this particular microbe or even a nonmicrobe.

In the case of tubercular bacilli, Dr. Youmans applied the test and out of 53 people with active pulmonary tuberculosis the test was positive in all but 2. They took another group of 48 people who thought they did not have tuberculosis and for whom there was no evidence, and the test was negative in all but 2 there, and of these 2 on subsequent examination one had a tuberculosis kidney removed and the other looked rather suspicious as if he might have tuberculosis.

BASIC RESEARCH IN ALLERGY

Here is an example in the development of basic research in the field of allergy, which has been picked up and applied in a practical way for a blood test, which is so simple that it could be done by any laboratory technician at any place.

To sum up, I have appeared in behalf of 3 different items in the Public Health Service budget and would like to request the sum of $5 million for the Institute of Allergy and Infectious Diseases for the extramural program and $1,600,000 for the traineeship and fellowship programs.

LETTER FROM DR. MAX J. MILLER

Senator HILL. In that connection, I have here a letter from Dr. Max J. Miller, president and research director, American Foundation for Tropical Medicine, New York, urging that this committee support increased funds for the National Institute of Allergy and Infectious Diseases. Dr. Miller's letter will become a part of the record at this point.

(The letter referred to follows:)

THE AMERICAN FOUNDATION FOR TROPICAL MEDICINE, INC.,
New York, N. Y., April 14, 1958.

Hon. LISTER HILL,
United States Senate, Washington, D. C.

DEAR SENATOR HILL: It has been brought to my attention that the administration budget requested this year for the National Institute of Allergy and Infectious Diseases is essentially the same as a year ago, viz: Extramural research grants, $10,824,000; training grants, $580,000; and research fellowships, $101,000. In view of the fact that research grant applications for approximately $14 million have already been approved for the current year by the study section, this is most surprising to me as it must be to you who has shown such a keen interest in and wide understanding of the problems of health, especially in the tropics where infectious diseases play an even more vital role.

As president and research director of the American Foundation for Tropical Medicine and its Liberian Research Institute, I am well acquainted with the overriding importance of research to the problems of infectious diseases. Even more can I appreciate the great service that can be rendered to health in the United States and in other countries where we are committed to help, by contributing to the solution of important infectious disease problems.

It is my personal opinion that a budget of less than $15 million for the Institute this year would be definitely inadequate, and it seems to me to be simply bad economics to discourage—because of curtailment of the budget by a relatively small amount of money—the research efforts of a large number of highly skilled research scientists in the field of allergy and infectious diseases.

I realize that the needs are great in many areas, but I also know that in no other field of activity are the returns so great for the money spent as in research. I sincerely hope, therefore, that sympathetic consideration will be given to the budget request for the National Institute of Allergy and Infectious Diseases with a view to increasing the budget to a figure of not less than $15 million.

Yours sincerely,

MAX J. MILLER, M. D.,
President and Research Director.

RECESS

Senator HILL. Are there any questions, Senator Stennis?

Senator STENNIS. I certainly enjoyed the testimony.

Senator HILL. Doctor, I am terribly sorry I had to be in another conference committee meeting with the House and Senate on agriculture appropriations. I just had to be there and could not hear all of your testimony, but that which I have heard has certainly been most enlightening and it is always challenging and I assure you I shall read the full text of your testimony and I know it will be of much benefit. We certainly thank you for being here.

We will adjourn until 2 o'clock.

(Whereupon, at 12:15 p. m., the subcommittee recessed to reconvene at 2 p. m. of the same day.)

AFTERNOON SESSION, 2 P. M., WEDNESDAY, MAY 14, 1958

TUBERCULOSIS CONTROL PROGRAM

STATEMENT OF DR. H. McLEOD RIGGINS, CLINICAL PROFESSOR OF MEDICINE, COLLEGE OF PHYSICIANS AND SURGEONS, COLUMBIA UNIVERSITY, NEW YORK CITY; ACCOMPANIED BY DR. W. C. DAVISON, DEAN OF THE SCHOOL OF MEDICINE, DUKE UNIVERSITY, DURHAM, N. C.

BASIC RESEARCH IN NEW VACCINE

Senator HILL. The committee will kindly come to order.

Dr. Riggins, will you come around, please, sir, and Dr. Davison. All right, Doctor, we will be glad to have you proceed, sir.

Dr. RIGGINS. Thank you very much.

There is a letter from Dr. David Smith of North Carolina, that he asked me to pass on to you.

Senator HILL. Yes, I have the original. We will put this letter in the record following your testimony. You go right ahead in your own way, sir.

Dr. RIGGINS. Mr. Chairman, I have submitted a written statement. My name is Dr. H. McLeod Riggins, New York City. I would like to talk off the cuff, if I may.

Senator HILL. All right, proceed in any way you see fit, sir.

Dr. RIGGINS. I am here, Senator, to make a plea for two items in the budget of the tuberculosis control program. First is the restoration of the proposed cuts in the budget of the tuberculosis control program for 1959.

Secondly, there is a certain substantial increase in the budget for this program in new funds. Now, in regard to the restoration of the proposed cut, I should like very much if I may to urge the committee and the Senate to reconsider, if feasible at all, and restore the cut of $1.614 million by the House and secondly, I should like very much to make a plea for a minimum of $2.5 million in new additional funds to be used at the discretion of the Tuberculosis Division for intramural and extramural activities in two major fields.

These two major fields are to finance additional basic research in the development of a new tuberculosis vaccine.

Secondly, for the use, application, and administration of BCG vaccine that we now have in accordance with the recommendations of the various committees who have spoken on this, the American Trudeau Society and the National Tuberculosis Association and the ad hoc committee of the Surgeon General's office.

It was my hope that some of these funds might be made available to the States and their subdivisions for the development of State and local BCG vaccination programs in accordance with the practice of the Public Health Service and applicable and feasible locally.

In substantiation of those requests, I should like to submit the following opinions and comments with regard to this need.

NEW TUBERCULOSIS TREATMENTS

In the first place, I should like to point out that during the past 15 years, as you know, there have been tremendous strides and progress in the treatment of tuberculosis.

That came on after the discovery of isoniazid and streptomiacine, but during that same period of time there has been very little real progress made in the development of a vaccine to prevent tuberculosis.

So we are still having a lot of tuberculosis. We are still struggling with the treatment of tuberculosis and doing pretty well.

Senator HILL. It is still a tremendously costly disease in every way?

Dr. RIGGINS. It certainly is. It seems to me it is less costly to prevent it if we can, than to treat it.

PRESENT INCIDENCE OF TUBERCULOSIS

Speaking of the cost, I have listed a few things here that I know you are well familiar with. One is that 14,000 people died of tuberculosis last year that we know about. There must have been a lot of people we did not know about who died of the disease.

There are 150,000 known, active cases of tuberculosis in the United States and another 100,000 unknown active cases estimated. It is estimated by conservative statisticians and public health officials that something like a half million active cases of tuberculosis are present.

Then, a very large group of people that were mentioned here this morning, but I think from the standpoint of public health and from the standpoint of what this committee and the Senate can do throughout Public Health Service, is the large number of people infected with living germs of tuberculosis, something like 40 or 50 or 60 million people who have the germs and who harbor these living germs and who may break down.

In addition to all that, the cost to the American people was an estimated $750 million last year.

Sir, while you were out, Dr. Stocklen made the comment that the Department of Agriculture, I believe, was spending $2 million to carry on the fight against TB in cattle and we only have a budget, I believe, of something like 5 or 6 million dollars to carry on the fight at the national level, for human beings.

I believe the tremendous cost of this very expensive and destructive disease deserves the continued support and the expanded support of the Senator and of your committee and I am here to make pleas along that line.

TUBERCULOSIS PREVENTION

Particularly, I would like to spend the rest of my time trying to explain to you some of the ways, as I see it, of preventing tuberculosis. It may be rather strange; I am a clinician and for 25 or so years have been accustomed to treating tuberculosis, but it seems to me as a clinician and interested in public health that we ought to do much more than we have been doing if we possibly can to prevent tuberculosis.

I think there are many ways that one can prevent tuberculosis. I believe that the proper use of BCG is one of those ways, but I would like to point out before I go into that too much that I do not believe that BCG vaccination should be regarded in any way as a substitute for these approved methods, such as case finding and treatment and other approved methods of TB control, but I do think in special groups such as has been outlined by the American Trudeau Society, the ad hoc committee of the Surgeon General, and the National Tuberculosis Association, in these certain groups I believe there is a real place for the application of BCG.

In those certain groups are the following, if I may mention them very briefly: (1) physicians and nurses in the young age groups, medical students who are likely to be unduly exposed to tuberculosis; (2) certain hospital and laboratory personnel whose work exposes them to contact either with tuberculosis cases that are infectious or tuberculosis germs which are always present in these laboratories; (3) certain other individuals, particularly the newborn and infants who are likely to be exposed to tuberculosis in the home; (4) and then a still further group of people, namely patients and employees who are exposed to known and unknown TB in mental hospitals and institutions; (5) and then, finally, groups of children and young adults living in limited geographic areas such as some of our hardest hit areas in New York City, Harlem, in which the prevalence and deaths from tuberculosis are high.

Now, I believe in all those types of areas groups of people, that BCG, even though it is not a perfect vaccine, could be very, very useful.

Senator HILL. Have not the British used it to a very considerable extent?

Dr. RIGGINS. Yes, sir, they have.

REPORT ON BCG VACCINE

Senator HILL. I recall an article in the London Lancer in January 1957 in which they made a complete report on the BCG.

DR. RIGGINS. They did and it was an excellent study.

Senator HILL. This article really was written as a result of this study.

Dr. RIGGINS. This article that you speak of was also published originally in the British Medical Journal in 1956. In this particular study that you speak about the British had two groups of people, one was a control group who had no evidence of tuberculosis in their systems as established by this tubercular test, and there were 20,500 people in 1 of these groups.

In the other group there were 19,600 people who likewise had no evidence of tuberculosis. The control group was 19,600, the vac-

cinated group was 20,500. Here are a few figures to illustrate what they found in that group.

They watched these 2 groups for 30 months. In the 20,500 vaccinated individuals there were only 18 who developed tuberculosis. In the 19,600 nonvaccinated individuals 97 developed definite, proven TB. So you see in the vaccinated group they only had 15.7 percent of the total TB in that group, whereas, they had some 85 percent of the tuberculosis in the nonvaccinated group.

These were cases that were followed up and verified very well. So I think one can say without any hesitation that in this particular study, done under the conditions imposed by that study and done by an excellent group of people very conservative in their observations and in their statements, that here we have a good example of BCG reducing the amount of tuberculosis very appreciably. That is the British example.

STUDY IN UNITED STATES AREAS

I would like to come home to our own country and cite a recent study which is about to be published in the American Review of Tuberculosis. This study was done in Puerto Rico and Muscogee County, Ga., and Russell County in your home State of Alabama.

This study was carried out by Dr. Carol Palmer of the United States Public Health Service and both of these groups of people were taken under observation about 6 or 7 years ago, respectively.

First, I would like to give you the results of that study in Muscogee and Russell Counties. In that study they found out the following: some 16,913 people were vaccinated with BCG and 17,844 were used as controls and had a negative tuberculosis test. In other words, they were thought not to have tuberculosis.

Now, they did various types of diagnostic studies and to the best of their ability they ruled out tuberculosis. However, there is some question that some of the people put into the control and also into the vaccinated group might have well had a tuberculosis infection which was not detected by the tuberculin test they used.

That is important because it means some of the people they put in the group which was to be vaccinated probably already had some tuberculosis in their system. Dr. Palmer, himself, was aware of that possibility.

That is important because if some of the people put in the control and vaccinated group already had tuberculosis, that would appreciably change the figures and might make the BCG effect look less promising.

However, notwithstanding that, in this particular group of individuals 28 individuals developed tuberculosis in the nonvaccinated group whereas, in the vaccinated group only 17 developed tuberculosis.

Now, that is, as Dr. Palmer put it himself, "the apparent effectiveness of BCG at the end of 4 years after vaccination was 47 percent as compared to 36 percent effectiveness at the end of 7 years after vaccination." Effectiveness did fall off during those last few years.

Senator HILL. The British statistics were much more favorable.

Dr. RIGGINS. They were considerably more favorable. I could go into details and tell you why, but I won't.

SUSCEPTIBILITY OF NEGROES TO TB

Senator HILL. I know this: Our colored friends in the past have been very, very much subject to tuberculosis.

Dr. RIGGINS. That is right.

Senator HILL. Knowing Muscogee and Russell Counties, I think you must have had a larger percentage of our colored friends and in the British Isles they must have had very few. That is a very important factor. I do not know that there is any disease that is worse from the standpoint of our colored friends than tuberculosis. So many of them had tuberculosis and so many of them died of tuberculosis.

Dr. RIGGINS. And they are still dying. At any rate, even under those circumstances that you have so well outlined, there was a very appreciable reduction in the amount of tuberculosis in the vaccinated group in comparison with the nonvaccinated group.

PUERTO RICAN STUDY

Now, the Puerto Rico study was a little different type of study. It was carried on 6½ years and there were 55,634 individuals vaccinated. There were 27,338 patients who were regarded as controls.

Within 6 years after vaccination 93 of the 55,000 people who were vaccinated developed what was presumed to be tuberculosis but not always proven. Seventy-three of the 27,338 controls also developed presumed tuberculosis, but not proven.

Dr. Palmer explains that. He goes ahead to point out that here the effectiveness of BCG was around 37 percent at the end of 4 years and 31 percent at the end of 6 years. So, even under these very adverse and trying conditions BCG really resulted in an appreciable and significant reduction in the disease.

Now, I have 1 or 2 other points, sir.

Senator HILL. Are you going to leave BCG?

Dr. RIGGINS. Not quite.

Senator HILL. What I was going to ask is this: In view of these facts that you have presented us, it is so important that our people be educated as to the benefits of BCG and that these different groups that you have enumerated here be vaccinated. Is that not right?

Dr. RIGGINS. I think it is terribly important. I wish I knew just exactly what is holding up the application of the BCG program. Partly, it is because our people are not ready for it, but we must remember that we have had BCG now for over 25 years and we in the medical profession really have not done too much to make this very effective agent work for us in certain high prevalence TB areas.

So I think we have to blame our doctors even more than our people, Senator. I think it is still time for the use of BCG despite the fact that we are in an era, to be sure, where the treatment is more effective than it has ever been in history.

Senator HILL. Yes; but how much better is prevention than any treatment.

Dr. RIGGINS. That is right. Having been cured of the disease myself, if I may be personal and if you will pardon the allusion, which has taken a year and a half of my time, I have always resented the loss of that time. I would rather that someone had prevented that and I would have had the choice.

Now, out of those patients in this Puerto Rico study, that is the vaccinated people and the controls, they had a certain number of deaths but the deaths in the control groups were much more than the deaths in the vaccinated group, about in the order or ratio of 6 to 1.

There, again, is the evidence. How one wants to interpret it, to me it is conclusive evidence that BCG in the study by Dr. Palmer was effective in cutting down the deaths of these individuals.

DISADVANTAGES OF BCG

Now, I would like to make a point or two about some of the practical and theoretical disadvantages of BCG. A lot of people have talked about the disadvantages and people who are, unduly perhaps, enthusiastic about BCG—and I am sure there are some of those—have talked just about advantages and forgot even to talk about the disadvantages.

As a matter of fact, there are both disadvantages and advantages. I would like to name a few of these disadvantages. It is claimed that one of the main disadvantages of using BCG is that we lose our most effective tool in diagnosis; namely, the tuberculin test.

There is some validity to that. However, there are claims that we will lose the test entirely. Well, we won't lose the test entirely because no one is advocating BCG vaccination for the total population.

Secondly, we will not lose the test entirely because there is no mass tuberculin testing program known to me or to anyone else today anyway.

Thirdly, we will not lose the test entirely in my personal experience because usually one can detect the difference between a skin reaction following BCG inoculation and a spontaneous infection.

In other words, barring a BCG vaccination, your skin reaction is rather mild. Following a spontaneous natural infection your skin reaction is rather severe. I think, as a rule, if an individual patient were sitting in this room we could tell whether or not the tuberculin test was due to the vaccination or due to spontaneous infection.

So you really have not lost this test by any means, particularly as a result of a BCG program such as we have outlined in these prevalent tuberculosis areas.

TRIED AND TRUE METHOD OF TB PREVENTION

Now, so much then for BCG, but in conclusion I would say that it certainly is a very tried and proven method of preventing tuberculosis in the very group of people who develop most of the tuberculosis, the exposed people.

Now, there is one other thing I would like to mention. That is that certain people who seem to be opposed to BCG unduly, I might add, are against its use and point out that it is not very effective against the patient or the person who has already had an infection.

Of course, it is not effective in that patient who has already had an infection. It is not designed to be. You cannot prevent something that has already occurred. But if we vaccinated that person who has become infected before he got infected we would certainly reduce the amount of tuberculosis in that group.

So much then, for the BCG prevention of tuberculosis.

ISONIAZID STUDY

I would like to say something about the isoniazid study now going in the Public Health Service. As you know, they are studying a group of children, 2,700 children, with isoniazid after those children have developed a positive tuberculin test.

That is with the idea of preventing further development of tuberculosis, not with the idea of preventing TB; they already have some, but with the idea of preventing further spread of the tuberculosis.

That is a good idea and I am for that program. That is treating people who have a positive tuberculin test, but have no evidence of active disease. I am all for that but there is no conflict between that and the BCG program that we are advocating.

The BCG program involves people who never become affected and we are trying to give them a certain amount of protection. We know that protection is not complete. We know that it does not last forever but we do believe it gives them a certain amount of protection and you can revaccinate with BCG just like you revaccinate for smallpox.

So, I would favor the continuation of the isoniazid study for treatment of the recent reactors but I would also favor development at the State level and subdivisions of the State of BCG program in these groups which have been designated now for 10 years by the National TB Association and the American Trudeau Society as groups suitable for BCG application.

Senator HILL. We have done relatively very little up to date.

Dr. RIGGINS. We have done practically nothing really except these studies.

Senator HILL. Do you feel now that the isoniazid study is going forward as adequately as it should?

Dr. RIGGINS. Senator Hill, I may be a little bit impatient. I think it is going forward well but on a very limited scale and I believe already evidence is available through the work of the Public Health Service as well as very large numbers of individual investigators to show that isoniazid is very effective in the treatment of these recently infected individuals but I think we need more evidence about this problem, that is the treatment of recently infected individuals with isoniazid, before we can think of applying it to these 40 or 50 million people that we have who are affected. I think we need much more information. I am very hopeful that you will restore the fifty or fifty-five thousand dollars which was cut from the isoniazid study and put this in in 1959.

Senator HILL. That was cut by the budget.

Dr. RIGGINS. Cut by the budget, yes. I know it was not cut by you.

Senator HILL. We have not even had a chance to increase yet.

Dr. RIGGINS. That concludes my report, Senator Hill.

WORK UNDER EARMARKED FUNDS

Senator HILL. Now, let me ask you this, Doctor: Two years ago we made an appropriation of some $1.2 million, you will recall, and we earmarked that amount of money for vaccine research in the field of tuberculosis.

Do you have anything you would like to add? Of course you have been talking about the BCG and the isoniazid. Is there anything else that ought to be done there? Is this thing going along as we contemplated?

Dr. RIGGINS. I do not know exactly how you contemplated it, but I imagine you were very hopeful they would get out a very effective vaccine in 2 or 3 years.

Senator HILL. That is right. That was my hope and prayer.

Dr. RIGGINS. I should say, as far as my knowledge goes, that that is really a very limited amount of money at work in relation to the tremendous problem involved.

You heard from Dr. McDermott who said this morning they were making some progress in that new vaccine but I would say this: Even at the most rapid rate you might imagine it might be a long time before that particular vaccine is proven to be good in human beings, proven to be better than BCG.

NEED FOR RESEARCH AND WIDER VACCINE USE

So, my point is this: I think we ought to have more money to be devoted to that basic research for making a better tuberculosis vaccine, sir, but I also think that we ought to use this $2.5 million or a large part of it for the real application of the present BCG vaccine in our worst TB areas throughout the country.

However, I am most hopeful that you and your committee, Senator, will be able to build a fire under somebody and get them working harder on two things—the perfection of a new vaccine, TB vaccine, and the improvement of the present BCG and the application of BCG or the use of BCG in these limited groups.

I think it would be very wrong to use BCG as a mass production thing. No one is really seriously advocating that at all, but there are places where I think it could be very useful.

Senator HILL. You have certainly brought us a most interesting and informative statement.

(The formal statement of Dr. Riggins and the letter submitted by him follow:)

MAY 8, 1958.

Senator LISTER HILL,
Senate Building, Washington, D. C.

DEAR SENATOR: My good friend, Dr. H. McLeod Riggins, invited me to accompany him for an appearance before your committee on May 14. Unfortunately, I am on the program several times at the Florida State medical meeting and I cannot get back in time for your committee meeting.

I am particularly concerned with two problems which are before your committee in relation to the plans for the tuberculosis budget for the Department of Health, Education, and Welfare.

The first has to do with the problem of BCG vaccination in this country. There seems to be general agreement that it is impractical and unnecessary to attempt to vaccinate the entire population or even all newborn infants in this country. The incidence of tuberculous infections would not justify the expense of such a program. On the other hand, I do not consider it wise to completely abandon the use of BCG as an immunizing agent. I agree entirely with the recommendation made by the Truedau Society that BCG vaccinations should be used in certain selected groups which are still exposed to a high incidence of infection. These are medical students, nurses, hospital attendants, laboratory workers, and children in families with known cases of tuberculosis. There is not yet available sufficient scientific information to justify the assumption that the treatment of tuberculin positive adults will be as effective as BCG vaccinations

in these select groups. I would not oppose but would actively support pilot experiments in which INH treatment was given to positive reactors. Indeed the most complete program would be vaccination for the tuberculin negative individuals and isoniazid treatment for the tuberculin positive ones.

In reading the testimony given before your committee I have gained the impression that the Department of Health, Education, and Welfare feels that their appropriations could be used more effectively in case-finding procedures than in pushing BCG vaccinations even in the limited areas recommended by the Trudeau Society. Perhaps an increase in appropriations would relieve them of this dilemma and allow them to push both programs since they are supplementary and not a substitute one for the other.

I am also concerned with the proposed reduction in the amount of money allocated for grants to the States to help their programs in the control of tuberculosis. These Federal funds represent only a small part of the States' budgets but will certainly do severe harm if reduced. It seems a little inconsistent for the Department of Health, Education, and Welfare to insist that this case-finding activity should be its major function and at the same time recommend a reduction in Federal funds for the same type of activity at the State level.

Sincerely yours,

David T. Smith, M. D.,
Professor of Microbiology.

Statement of Dr. H. McLeod Riggins

I am here to make a plea for (*a*) the restoration of proposed cuts in the budget of the tuberculosis-control program for fiscal 1959, and for (*b*) certain substantial increases in the budget of this program.

RESTORATION OF PROPOSED CUTS

I should like to urge the committee to reconsider and if feasible or possible restore the cut of $1,614,000 to the budget of the tuberculosis-control program for fiscal 1959.

Secondly, I should like to make a plea for a minimum of $2,500,000 in new additional funds, to be used at the discretion of the Tuberculosis Division for intramural or extramural activities in two major fields. First, to finance additional basic research for the development of a new and more effective tuberculosis vaccine. Second, for the use, application, and administration of BCG vaccine, in accordance with the recommendations of the Surgeon General's ad hoc committee on BCG vaccine, and the recently revised recommendation of the American Trudeau Society and the National Tuberculosis Association on the same subject. It is hoped that some of these new funds might be made available to States or their subdivisions for the development of local or State BCG vaccination programs, in accordance with accepted principles and practices of the United States Public Health Service and applicable and feasible locally. The following comments, opinions, and facts are offered substantiation of these several requests.

While great, even dramatic progress has been made in the treatment of tuberculosis in the past 15 years, on the contrary very little has been accomplished in the development of a new tuberculosis vaccine or improvement in the presently available BCG vaccine, except for certain refinements relative to standardization, stabilization, and administration.

The cost of tuberculosis

Regardless of how the cost of tuberculosis is measured in the United States, in terms of the humanitarian, personal, medical, public health, social, and economic aspects, or in all, it is far better to prevent tuberculosis than to treat it. The cost (even for such a wealthy Nation as ours), is staggering, as partially indicated by the following:

1. Some 14,000 people died of tuberculosis last year.
2. There are approximately 150,000 known active cases of tuberculosis in the United States.
3. In addition it is estimated that there are some 100,000 unknown active cases.
4. It is estimated that there are a total of 550,000 inactive cases.
5. Also it is estimated that one-fourth to one-third of the population or possibly 50 million individuals are infected with and harboring living and potentially life-threatening tuberculosis germs.

6. It is estimated that last year tuberculosis cost the American people some $750 million.

In this country, where life is meaningful and good health one of our greatest achievements, the Nation can ill afford this preventable public health and economic strain and the growing smugness and complacency in certain places regarding public health efforts to further reduce and eventually eradicate tuberculosis. In a world where competition and ability to compete successfully, may ultimately decide our destiny, as it has decided that of other favorably situated nations, the United States cannot afford either to sacrifice, or fail to improve its greatest national asset—good health. The Nation must continue to provide for better public health by all possible methods and means including the development of a better tuberculosis vaccine and, in the meanwhile for the wider use of BCG vaccine in those areas and groups where the prevalence of tuberculosis is high as suggested by the American Trudeau Society, the National Tuberculosis Association, and more recently by the ad hoc advisory committee on BCG to the Surgeon General of the United States Public Health Service.

What are the advantages and disadvantages of BCG as indicated in the more conservative reports in medical literature? Based upon the recommendations and observations in these reports, and upon a rather long even though limited personal experience with BCG, the following observations and recommendations concerning the use of BCG vaccine may be made:

1. BCG vaccination should not be regarded as a substitute for approved and well-established measures and public health practices, designed to prevent tuberculosis infection and disease. Vaccination should be regarded as only one of several effective procedures traditionally used in tuberculosis control.

2. Modern diagnostic, therapeutic, and rehabilitation facilities should be improved, modernized, and expanded rather than curtailed, now that tuberculosis can be more effectively treated than ever before in medical history.

3. Since BCG vaccination results in incomplete protection at best, as shown by practically all worthwhile studies, other effective methods of preventing and controlling tuberculosis in the general population should be vigorously pushed. These methods have been indicated in the statement of the American Trudeau Society, April 30, 1949, recently revised, and by others.

4. Also since the protection from tuberculosis afforded by BCG vaccination is incomplete, and the duration of partial immunity unpredictable, it should be strongly emphasized that further basic research on artificial immunization against tuberculosis is greatly needed.

5. *Areas of recommended use.*—On the basis of conservative reports and on personal experience with BCG, the following observations and recommendations are offered:

(*a*) A very appreciable reduction in the annual incidence and total prevalence of tuberculosis can be expected when certain local groups of people likely to develop tuberculosis because of unusual exposure, inferior resistance, or both, are vaccinated. The following individuals and more vulnerable groups may be considered as suitable for BCG vaccination and revaccination, provided they do not react to adequate tuberculin tests:

(*b*) Physicians and nurses in the younger age groups, and medical students who are likely to be unduly exposed to tuberculosis.

(*c*) Certain hospital and laboratory personnel whose work exposes them unduly to contact with cases of tuberculosis or with tuberculosis germs.

(*d*) Certain individuals, particularly the new born and infants who are likely to be exposed to tuberculosis in the home.

(*e*) Certain noninfected patients and employees in mental hospitals, prisons, and other custodial institution, where the prevalence of tuberculosis is high, and where such employees and patients are likely to be unduly exposed.

(*f*) Certain children and young adults living in limited geographical areas, especially in large crowded cities, in which the prevalence and deaths from tuberculosis are high.

Example of the effectiveness of BCG in certain population groups

Brief examples from two recent controlled studies will be considered.

1. *The study and report of the British Medical Research Council.*—Published in the British Medical Journal, February 25, 1956. In this well-controlled and conducted study there were some 20,500 adolescent individuals vaccinated with BCG, previously shown not to have evidence of tuberculous infection or disease. Simultaneously a second, or control group of 19,600 individuals likewise shown not to have any evidence of tuberculous infection or disease were examined

periodically but were not vaccinated. Subsequent to vaccination and the beginning of observations, these groups were periodically examined by specialists in tuberculosis over a period of 30 months. A brief summary of their findings follows:

(*a*) Tuberculosis in the vaccinated group: There were 18 individuals in the 20,500 vaccinated who developed definite tuberculosis. There were 97 individuals in the 19,600 nonvaccinated who developed definite tuberculosis. Therefore, a total of 115 individuals in these 2 groups developed tuberculosis during the 30 months of observation. Of these 115 tuberculosis cases, 18 or only 15.7 percent were in the vaccinated group, whereas 97 or 84.3 percent were in the nonvaccinated group. Stated in another way, it can be said that approximately 0.5 percent of the individual in the control or nonvaccinated group developed tuberculosis, whereas only 0.1 percent of the individuals in the vaccinated group developed tuberculosis. Therefore more than 80 percent of the people developing tuberculosis were in the nonvaccinated control group. Since it is a mathematical fact that 0.1 percent is 20 percent of 0.5 percent, it can then be said that in the recent British BCG study, vaccination appeared to give more than 80 percent protection, despite recent testimony to the contrary before Representative Fogarty's committee.

2. *Examples of the effectiveness of BCG in the United States.*—One of the most recent control studies made in this country was by Dr. Carroll E. Palmer and his coworkers of the United States Public Health Service. Dr. Palmer has kindly furnished me a copy of this most interesting report. Despite the fact that this is probably one of the most conservative reports concerning the effectiveness of BCG in this country, or elsewhere, nevertheless, there is considerable and significant evidence to indicate that BCG vaccination in the population groups studied resulted in an appreciable reduction in the development of tuberculosis in the vaccinated individuals.

These extensive studies were conducted in Puerto Rico and, in Muscogee County, Ga., and Russell County, Ala.

Muscogee-Russell Counties study

This study group has been followed for approximately 7 years after some 16,913 individuals were vaccinated with BCG and 17,854 individuals used as controls. It is reported that diagnostic studies prior to vaccination did not show any evidence of tuberculous infection either in the vaccinated or in the control group. There is room for some doubt, however, that tuberculin tests in some of these individuals definitely ruled out tuberculous infection in all of the "nonreactors." If this assumption should be so, it would seriously weaken some of the major conclusions regarding the noneffectiveness of BCG in this study. In any event, it is reported that in the nonvaccinated or control group, 28 individuals developed tuberculosis, whereas, in the vaccinated group, only 17 individuals developed tuberculosis. Dr. Palmer concludes that "the apparent effectiveness (of BCG) at the end of 4 years (after vaccination) was 47 percent as compared to 36 percent at the end of 7 years after vaccination."

Comment: From these very conservative figures of an experienced worker it can be readily seen that BCG vaccination under the conditions of this study showed a very appreciable reduction in the development of tuberculosis in the vaccinated group in comparison with the nonvaccinated control group.

The Puerto Rico study

In this study, a total of 55,634 individuals were vaccinated having no evidence of previous tuberculosis and 27,338 individuals with no tuberculous infection were used as controls. The two groups were observed over a period of 6.3 years. Individuals in both groups developed disease, presumed to be tuberculosis in nature by local physicians, but was not actually proved to be tuberculosis in a large proportion of cases. Within 6 years after vaccination 93 of the 55,634 vaccinated developed some form of presumed tuberculosis, and 73 of the 27,338 controls developed disease presumed to be tuberculosis, but not proved in either group in a large percent of the cases.

The report concluded that the apparent effectiveness of BCG declined from 37 percent at the end of 4 years to 31 percent at the end of 6 years.

Dr. H. M. Riggins

Comment: These figures clearly show that when subject to the observation and analysis of a conservative research worker as Dr. Palmer, BCG vaccination caused a very appreciable reduction in tuberculosis in the vaccinated group in comparison to the nonvaccinated. And there is another important point.

It was emphasized in Dr. Palmer's report that the disease which developed in the control and the vaccinated groups was thought to be tuberculosis in nature but was not proved to be so in many cases. In fact in the 28 controls of the M–R Counties Group, who developed disease thought to be tuberculosis, only 9, or less than a third were actually proved to have tuberculosis according to Dr. Palmer's report. Also of the 17 vaccinees who developed disease thought to be tuberculosis, only 8 or less than half were definitely proved to be tuberculosis. It was not stated whether the patients whose disease was thought to be tuberculosis, developed or continued to have, a positive tuberculin test at the time the disease was diagnosed as tuberculosis. It was also brought out that many different physicians made the diagnoses and that the diagnoses of tuberculosis were neither made nor confirmed by a tuberculosis specialist of the study group as was the case in the British BCG study.

It is the writer's considered judgment and it is generally agreed that it is often very difficult, even in a hospital with excellent diagnostic facilities, to distinguish between tuberculosis and other similar diseases, such as fungus and viral infections and still other diseases. It must be concluded therefore, that some, if not many, of the patients thought to have tuberculosis in both the control and vaccinated groups, actually may have had some other similar but nontuberculous disease. What is the importance and implication of this possible error in diagnosis with regard to the actual amount of tuberculosis in the vaccinated group and the effectiveness of BCG? It means that the vaccinated group was vaccinated only against tuberculosis and not against other diseases simulating tuberculosis and for which the vaccination offered no protection. Therefore, unless one can be absolutely certain that the disease which developed in the vaccinated individuals was indeed tuberculosis, one would have to admit that BCG may have been even more effective in this study than indicated by the figures quoted. This is a very important point with regard to the critical evaluation of any BCG study, and has vital bearing on the point at issue, namely, the actual effectiveness of BCG vaccine.

TUBERCULOSIS DEATHS IN THE CONTROL AND THE VACCINATED GROUPS

Dr. Palmer and coworker also report another important finding in this study. They state that "Among (the 27,338) control, 5 (tuberculosis) deaths were observed, compared with 2 (tuberculosis) deaths among the (55,654) vaccinees." This represent approximately six times as many tuberculosis deaths (per unit) in the controls as in the vaccinees. This fact along with many previous similar reports indicates that BCG vaccination can be very significant factor in preventing tuberculosis deaths, the ultimate test of any preventive measure.

AN APPRAISAL OF CERTAIN THEORETICAL AND ACTUAL DISADVANTAGES OF BCG VACCINATIONS

A great deal has been written and said about the theoretical and the actual disadvantages of BCG especially by those who unduly oppose BCG and wish to strengthen their position. The contrary may also be said, about those who are unduly enthusiastic about BCG. They often tend to minimize the disadvantages. The facts indicate the BCG does have certain theoretical and practical disadvantages, therefore, the reason for the plea for additional research funds for investigation of the many unsolved and basic problems in the complex field of tuberculosis immunization and vaccination.

Practical disadvantages

BCG vaccine is difficult to manufacture to standardize, to stabilize, to transport, to use, and is fairly expensive when administered in small lots. Its use and, particularly its misuse may lead to certain complication and rare hazards. If administered intradermally, it may cause a persistent ulceration or sore and associated inflammation of adjacent lymph nodes; when administered by the improved modern multiple puncture method, however, most complications can be avoided. Out of many millions of vaccinated individual, extremely rare cases of tuberculosis have been attributed to the vaccine, but not definitely proved beyond all scientific doubt to be caused by the vaccine.

A frequently advanced argument is that the mass use of BCG vaccination of the population at large destroys one of the most effective diagnostic tools, namely the use of the tuberculin test. The best answer to this argument is that no one is presently advocating mass BCG vaccination of the population at large in the United States.

It is also claimed that BCG vaccination would prevent the usefulness of mass tuberculin testing. This argument might be partially valid if there existed actually a comprehensive mass tuberculin testing program for a majority of the population. Such an argument is purely theoretical in the sense and to the degree that mass tuberculin testing of the entire population is also theoretical. Actually, a relatively small percent of the population is tuberculin tested annually or even once every decade. Recently, in objecting to the use of BCG on this ground, it was stated before Representative Fogarty's committee (2d sess. of of the 86th Cong., p. 245 of the hearing) that "all schoolchildren are being (tuberculin) tested." This is far from the actual facts and this statement can be verified by informed, countrywide health authorities and physicians. Also against this theoretical argument, is the fact that the tuberculin test as a diagnostic procedure would be preserved for those population groups in which tuberculosis prevalence is low, as in the many Midwest and Western States. Nor is the diagnostic value of the tuberculin test always totally lost in studying previously BCG vaccinated individuals, since the tuberculin skin reaction in vaccinated individuals who have not become spontaneously infected, is often if not usually of a lesser degree of severity than tuberculin reactors spontaneously infected with ordinary tuberculosis germs. For the experienced diagnostician or physician, this difference in the severity of the tuberculin reaction is significant and in the individual case spontaneous infection can usually be distinguished from the weaker BCG or artificial infection.

In conclusion: There are certain disadvantages to the use of BCG as there are to the use of any vaccine, especially those containing living germs. However, in high tuberculosis prevalence areas or groups of people as outlined by the American Trudeau Society, the National Tuberculosis Association, and the ad hoc committee statement, these "disadvantages are outweighed by the advantages."

BCG VACCINATION AND THE POSITIVE TUBERCULIN REACTORS

Recently, another rather farfetched claim against the use of BCG has been advanced, namely, that BCG does not reduce the development of tuberculosis in individuals having a positive tuberculin test and, therefore, already infected with virulent tuberculosis germs. This argument is neither scientific nor valid. How can one prevent something that has already occurred. Such is obviously impossible even with a perfect vaccine which BCG is not. The fact that the overwhelming majority, if not all cases of tuberculous disease and death come from individuals who have a positive tuberculin reaction and therefore infected with virulent tuberculosis germs, is the best possible argument for the use of BCG in these individuals before they become infected with dangerous tuberculosis germs.

All reliable studies have shown that the use of BCG in vulnerable noninfected groups, very appreciably reduces (a ratio of 1 to 6 in Dr. Palmer's recent study) tuberculosis deaths. This argument actually emphasizes a weakness in the overall tuberculosis prevention and control programs in the more vulnerable population groups.

ISONIAZID IN THE TREATMENT OF POSITIVE TUBERCULIN REACTORS

Another farfetched argument aginst the use of BCG even in high tuberculosis prevalence areas and groups, is the claim that it is more feasible and better to give izoniazid to individuals who become sponteneously infected with dangerous tuberculosis germs, than to vaccinate with BCG. This claim is most doubtful considering all the complex problems, difficulties and the tremendous expense of treating an estimated 50 million infected people by method not yet scientifically proved.

It is believed, however, that the excellent isoniazid research program being conducted by the Public Health Service under the able direction of Dr. Palmer and his group, should be continued and possibly expanded in order to determine many necessary and needed facts relative to this method of tuberculosis control. And a plea is hereby made to restore all necessary funds to carry on this promising isoniazid study. This proposed program of treating tuberculous infected individuals with isoniazid is in no conflict with, but on the contrary, supplements a limited BCG program. The isoniazid program proposes to treat tuberculous infected individuals, the BCG program proposes to help protect vulnerable uninfected individuals.

VACCINE USE IN OTHER COUNTRIES

Senator HILL. Dr. Davison.

Dr. DAVISON. I would like to emphasize everything that Dr. Riggins has said and focus it a little bit more sharply. We have a good vaccine now. It is not perfect. It has been well tested in the European countries. I have been in Scandinavia.

When they stopped it in Sweden 5 years ago the TB rate rose promptly. They put it back and made it mandatory. It is mandatory in Denmark, Norway, and now in Sweden. It is mandatory in a good many parts of England on a country distribution basis there.

I got interested in it when I was in Japan. We did about 20 million vaccinations with BCG. We had only 1 accident. One Japanese physician could not read the syringe. He gave a full cubic centimeter instead of one-tenth of a cubic centimeter.

We have gotten rid of that possibility. We have an instrument that you pick out of the sterilizer with a magnet. You nick the top off that and pour the solution in. That is enough for 10 people.

METHOD OF VACCINE APPLICATION

You tip that down on the child's arm or shoulder, just the same way as we do with smallpox. You cannot overdose it; it is perfectly safe. To answer your question, why you do not use it, there are three men in this country who are very well known tuberculosis experts, all three friends of mine, who just do not believe in it.

They have never had an experience with it and they have persuaded a fair number of people that there must be some better way than using BCG vaccine.

In our medical school when we made them compulsory, the TB stopped. Up to that time we had 2 or 3 students every year that had TB, including my own daughter.

But I went back to the Orient again and in Formosa we used it and in the Philippines. I think it has been more responsible for the reduction of TB in the countries where we worked under WHO than anything else.

FUND REQUIREMENTS FOR TEST

It is cheap. It will require, if we make it a statewide program in the 48 States, about $2½ million to do the tuberculin test. If it is negative, you stick the child with this sticker and put the vaccine on. Six weeks later you test him again to make sure the test was successful and that requires money and personnel.

Now, the States can do it through their State boards of health if they had encouragement from Washington and had the money to do the State program.

Senator HILL. In other words, if the Public Health Service had the encouragement and we provided the funds, you think it would be done?

Dr. DAVISON. In my State of North Carolina, the State health department would put it in overnight. We have the BCG service in the two Duke hospitals. It is compulsory for the medical students and nurses and it is a free BCG clinic.

Anybody that wants it or if the doctor wants his patients to have it, they call up the resident in the hospital and they come in and get it free. It is not very expensive. These 2 things cost $1.50. That is enough for 10 people or 15 cents apiece.

AVAILABILITY IN WHO

These things can be used indefinitely. The only trouble we have is that the interns lose them once in a while. The time consuming part is the personnel. I am hopeful that we can have it available all over the country as it is now available through WHO in all the countries we are giving lend-lease money to, Vietnam, Indonesia, Formosa, Taiwan, and now the Japanese are doing it themselves in Japan.

The British and the Scandinavian countries have been doing it for 20 years. It has been very successful. It is now compulsory in France. They are so busy with the Algerian crisis they have not had much time to do it. I am sure that once they see the benefit of it, it will be just as popular as among doctors and the patients and the parents as whooping cough vaccine and typhoid vaccine and so on.

We have a very low rate for whooping cough and typhoid and smallpox; yet we still keep on immunizing those children for fear the thing will break out again, otherwise, they will have the experience that Sweden had when they stopped it.

There are not many people who die of TB now but a lot of them get it, 100,000 a year. In the case of my daughter, it was 2 years in a sanitarium. In the case of Dr. Riggins it was 1½ years. It ought to be prevented. About 90 percent of these children have a positive take.

EFFECTIVENESS OF TREATMENTS

As far as we know, they are protected for about 7 years. I think it ought to be done to newborn infants. We do it whenever we have persuaded the family or family physician to do it, but there is this reluctance because three very well-known doctors in this country say they do not believe in it, that we should wait for a better approach.

Senator HILL. What is the better approach?

Dr. DAVISON. We have not found it. The difficulty with isoniazid is among the poor people they will not come back repeatedly to get the free isoniazid and among the private patients they cannot afford it.

It means taking medicine over a long period. It means locking the stable after the horse is stolen. I think it is far better to prevent the disease than not to have to treat it.

Senator HILL. You agree with Dr. Riggins, that we ought to press forward our program on research to find new and better methods?

Dr. DAVISON. Yes. It is not perfect. This is about 90 percent protection for 7 years. We might get it up to 98 percent or for life, but we do have the method now. We do have the method for preventing TB.

All we need is a little impetus from Washington with respect to the States and counties to make it more widespread.

Senator HILL. The fact is that so many people do not die from TB like they did in the old days; still, many of them have it today and we ought to press foward with everything we have.

Dr. DAVISON. Yes. It is expensive to take care of them. It is uneconomical for the student and for the wage earner to be out of circulation for any length of time.

I appreciate this opportunity of talking to you because I am quite an enthusiastic individual for BCG, having seen a good many thousands all over the world and talking to people who are doing this program as well as talking to the people at Duke.

UNITED STATES USE OF VACCINE

Senator HILL. There is a book just taken off the press on WHO, written by Merril Morgan of Washington. He speaks about what WHO is doing in using BCG. I read this book. I kept wondering why, if WHO is using it, and we are the big brother to WHO so to speak, why we are using it for our friends overseas and we are not making more use of it here at home.

The thing resolved itself largely in a matter of leadership and education. If you tell the people the facts, they will respond. Those in authority have to assume the duty of making known these facts, challenging the people. Is that right, Doctor?

Dr. RIGGINS. That is right. It is a complex thing to do, to vaccinate a lot of people, but I do not think anyone is advocating the vaccination of everybody. We are advocating the vaccination of these people who are in the greatest danger.

It is like the matter of baseball. The catcher who is back there behind the bat has to have a little more protection than the man out in right field because he has more risk.

Sure, it is cumbersome for him to wear that mask and the other paraphernalia but that protection is worth something to him.

Senator HILL. You mean if he wants to keep his nose.

Dr. RIGGINS. Yes. It is the same with BCG. If you are in more danger, you ought to use BCG.

Senator HILL. This has certainly been most interesting testimony. Is there anything else either one of you would like to add?

Dr. RIGGINS. We appreciate very much the opportunity of presenting this side of the question.

Senator HILL. It is very nice to have had you here. We appreciate it deeply. Thank you.

Dr. RIGGINS. Thank you, Mr. Chairman.

INTEREST OF SENATOR IVES

Senator HILL. Now, Dr. Hilleboe, we are glad to have you here, sir.

I want to say that Senator Ives is a member of this committee and he was very anxious to be here today. He made all his plans to be here. Then, it became necessary for him to go to the hospital for a medical checkup. That is the reason he is not here.

He is not only interested in hearing your testimony but he is interested in all this and he is also a very fine Senator.

THE ASSOCIATION OF STATE AND TERRITORIAL HEALTH OFFICERS

STATEMENT OF DR. HERMAN E. HILLEBOE, PRESIDENT, ALSO DIRECTOR OF THE NEW YORK STATE DEPARTMENT OF HEALTH

PUBLIC HEALTH FUNDS

Dr. HILLEBOE. I appreciate that very much. When I see him the next time I will tell him the very nice things you have said about him.

Senator HILL. We are glad to have you here.

Dr. HILLEBOE. I appreciate the opportunity of appearing before you. I have submitted my statement. I think you know at the present time I am the commissioner of health of New York State and I have been there since June 1, 1947.

I served under a Republican governor and I am serving under a Democratic governor. I am sure you appreciate, too, Senator Hill, that I am very much interested in many of the fields of public health with which you are quite familiar.

You will recall in 1946 and 1947 I assisted Dr. Parran in some of the earlier work which were some of the most thrilling days of my career in public health.

I am speaking today as the president of the State and Territorial Health Officers Association. By chance we are meeting over in HEW in an all-day meeting on many of our current problems. So I am speaking rather currently in our attitude toward many of these problems.

First, I should like to mention that in our opinion, there are continuing responsibilities in the field of public health. I think these extend beyond State borders. I think they include international responsibilities.

I believe that some of the changes that have been occurring in recent years in which the Federal Government has played more of a role of demonstrator, stimulator, and evaluator, is the practical one we have sought for as long as a decade.

I am pleased that the Public Health Service is getting into that type of operation rather than direct service which is, I feel, the responsibility of the State.

NEED FOR RESEARCH AND TRAINING

I think, too, it is becoming apparent to us that with the increased need for research and training that public health must now involve service, it must involve research, it must involve training.

There are certain things that those of us in the richer States can do but I think the Federal Government has certain responsibilities to cover research and training of the people who do not have the resources.

To us, one of the most important or necessary things is the importance of making no hurried changes in the Federal grants-in-aid program. I am sure you appreciate this fact because if appropriations are cut in one particular year, about half of the States have no opportunity to provide themselves for what should be done.

Senator HILL. The legislatures are not always in session.

Dr. HILLEBOE. That is right. In many of the States it is every 2 years. This happened to us back in 1953. It was unfortunate. It was a thing which was not good because the States lose people and when the funds were restored, the people were gone and would not return.

GRANTS IN FIELD OF CHRONIC DISEASES

One of the appropriations in fiscal 1958 that you made, and I think wisely so, is $3 million for grants-in-aid for general health to develop new activities, particularly in the field of chronic disease.

Prior to coming in here, I had an opportunity to discuss this program with many of my colleagues. I would say this has been most useful

in many respects. There have been new bureaus of chronic disease set up in the States. Where possible, States like to have personnel so that they have continuity.

There have been new programs for diabetics protection, new programs for glaucoma detection. These are two of the chronic diseases you do not hear much about.

Interestingly enough, out of every 1,000 adults we have been testing in recent months in our State, 20 out of every 1,000 have been shown to have diabetes malady. The significant thing is that 10 of these 20 individuals did not know that they had the disease.

These are people working every day, raising a family, going along, until suddenly catastrophe hits them and then they are in trouble. This is the spirit of public health, early diagnosis, early treatment by the family physician.

The same thing is true of glaucoma. That is a disease of the eyes where the pressure in the eyeball is increased. That sometimes causes automobile accidents; it is not alcohol, which is usually blamed for 100 percent of them. Some of them are due to glaucoma.

Senator HILL. The people suffering from glaucoma do not realize that?

Dr. HILLEBOE. That is correct. With some of these funds we have been setting up glaucoma testing programs. This is difficult. Here again, we have found about the same results as in diabetes, about 20 out of every 1,000 individuals have shown evidence of glaucoma.

Again, 10 of these 20 had no knowledge whatsoever. The significant thing here is that if the disease is detected earlier our ophthalmologists can do a good job.

I present these because they are a couple of examples of what can be done with new money. You may wonder why we are concerned with this. Somebody has to go out and find the people. This is what our public health nurses do. Somebody has to follow the people after they leave the hospitals and places where they receive care.

NEW YORK STUDY

We have been carrying on an interesting study in New York State. As you may know, there is a public assistance program that is rather large. I know you know about the details of it but perhaps you do not know the size of it in a State like New York.

We have 40,000 adults receiving aid to the disabled under the public assistance program. This is State, Federal and local distribution of funds. The average grant is about $85. When you multiply $85 by 12 months by 40,000 you come up to the sum of $40 million.

This is a costly thing, so we worked out a joint program in which we would find the people, get social welfare in on it, vocation and rehabilitation in on it, and we have taken these people and at the present time we have handled over 300 of them and put them in a hospital where we can give the kind of rehabilitation that is necessary.

Seventy percent are these three categories, arthritis of the severe disabling kind, people bedridden with bed sores requiring care and left hopelessly in some back bedroom.

Secondly, what we call cerebrovascular accidents, third, some injury to the spine where the person is paralyzed. These are the most

difficult kinds. They have been given up as hopeless. The Government has described them as permanently and totally disabled.

We have taken 350 of these people on a joint program and over a period of an average of 3 months service in a hospital we have been able to improve 53 percent of them.

Of the first 100 cases, even though it was not very large, we were able to bring 3 of them back to employment. Now, even for 3 people where you reduce the cost from $85 a month for 12 months, you get rid of that unnecessary care and bring, I think, dignity back to these individuals.

This is the kind of thing this money is used for. I thought rather than asking you for more money in every field, I would tell you what we are doing with some of the money you have given to us. We have used some of the fund for radiological health programs.

RADIOLOGICAL HEALTH

Here I should mention just briefly that we are greatly concerned about radiological health. I am not talking now of weapons testing because this is something that is governmental policy and beyond my field of competence, but I am talking about the kind of radiological problems that we have in the use of X-ray equipment and the kind of discharges that are now going into our streams and in the air from our industrial plants.

The health department is the logical one to carry out some kind of protection. When we first got into water pollution control and air pollution control we made many mistakes.

We found things wrong and we corrected them. We do not have this chance in radiological health. We do not have a second chance as you know, so I think this program that is being supported now in the Public Health Service to train people, to get groups working on this with some of the moneys coming to us, is something that is going to become one of our most important problems in the next decade.

Now is the time to prepare for this because we are not going to have a second chance. I want to say the moneys you have made available and the money in your budget for this program for Public Health Service is important and I would hope that it continues to be supported.

Senator HILL. Do you think it is sufficient?

Dr. HILLEBOE. I think it is sufficient even though it is small in amount.

Senator HILL. It is rather small, relatively speaking.

Dr. HILLEBOE. It is, but there are so few people that are trained. I think we must go slowly and strive for quality. As a mater of fact, I do not think we could spend much money in the first year or two.

Until we train them, I do not think we should ask for more money. I think it is proceeding very nicely.

INDIAN HEALTH

Indian health you have heard a good bit about but I think you might like to hear from a health officer who used to be concerned

about it in Minnesota. I was health officer in Minnesota from 1933 to 1942 and my special field was tuberculosis.

I was an epidemiologist that made studies among the Indians. When I contrast what was going on in 1933, 1934, and 1935 with what I see now in 1957 and 1958, it is like the difference between day and night. There have been many criticisms of the Indian health program—we do not have enough people, not enough hospitals. I think we must appreciate that the Public Health Service and the public health departments have done a tremendous job in tooling up.

Doctors do not like to go out in isolated areas. They do not particularly care to work with special groups for reasons that are obvious. So I think this program is one that requires more support than it is getting at the present time.

The appropriation is something on the order of around $40 million and I think that it probably takes more money than that. Some of the estimates that have been approximated were $45 million.

This, I imagine, is a matter of negotiation but I still do know that we have a long way to go before the health of the Indians will approach that of many Americans.

I can speak impartially about this, Senator Hill, because in New York State we receive no Federal funds for the care of the Indians. I run an Indian health program, and I run that Indian health program using our ordinary resources. We have our own doctors, our own clinics; we use general practitioners and specialists in the communities.

This ultimately, I think, is where our program will come to. It seems to me, with what we know about what has been done, we do more preventative service because this is the only way of cutting down the costs. I would hope you would take this into consideration.

Senator HILL. Do you get pretty good cooperation from the Indians in your health program?

Dr. HILLEBOE. Yes, we get excellent cooperation. They use our facilities. Our nursing staff goes into their homes. They come to our clinics. They really are blending in with the community. They are a bit of trouble with the power authority when the power authority takes over some of their land.

EFFECT OF CUT IN TUBERCULOSIS CONTROL FUNDS

I would like to speak briefly of tuberculosis control. You may recall, I started the tuberculosis program in 1934 under the help and guidance of Dr. Parran. I, of course, have watched this since 1934 and before that time I did it in Minnesota.

I think too, that a reduction in the control funds which have been cut down from $4½ million to $3 million, or a 33-percent cut, is too stringent a cut. The reason I say that is that in February I polled all of our State health officers. I tabulated replies from the first 40 of them before we had our other hearings, and I have specific information in the record for you.

I will not bother you with it now, but I can tell you specifically how it will affect every single State. People think that tuberculosis is pretty well on the run because hospitals are being closed. In New York State last year we spent $40 million for the hospitalization of the tuberculars.

FUNDS EXPENDITURE

It is interesting that 2 years ago I closed a 250-bed hospital and saved the State $1 million in State funds. This year, I am closing another one but the fact still remains that we are spending about $40 million on what is left.

The Federal funds come in and complement this $40 million of State funds to let us have the case finding programs, to let us have the followup programs that are so necessary. I simply want to point out that I have documented for your committee State by State, the details of how this would affect us.

Senator HILL. Is that in your statement?

Dr. HILLEBOE. Yes.

Senator HILL. Good.

Dr. HILLEBOE. So that there is no question in our minds that cutting off this appropriation by a third will make us discharge certain employees that we have trained, physicians, nurses, specialists.

We are going to have to cut out case finding, followup work. Those things are so important in complementing hospital care. We are going to have to cut out rehabilitation service.

Having been in this picture since 1934 I speak strongly on this point because people have a tendency to let up the pressure when something gets better. Here is a case where we have to increase the pressure because it is more difficult to do this part of the job.

I simply want you to know that we feel very strongly about this and we think we should proceed accordingly.

VIEWS ON BCG

Before I leave tuberculosis, I would like to say I was rather startled by some of the comments made on BCG. If time permitted I would like to express 1 or 2 views on this subject.

Senator HILL. We will be glad to have your views.

Dr. HILLEBOE. I heard Dr. Riggins and Dr. Davison, both of whom are excellent clinicians. Dr. Riggins is a person with whom I have been associated for a great many years. I have great respect for his clinical judgment and experience. Dr. Davison is a pediatrician.

I think we must say, as health officers, we have given this subject a good bit of thought and we have brought in the top experts that we have in the field. I think we should point out very specifically a few things that need to be said.

First of all, BCG is only a small part of the answer in our tuberculosis program. I would say it is something down in the 10 percent category of effectiveness in the total program.

Senator HILL. That is considering the whole population?

Dr. HILLEBOE. What you are going to do in the prevention of tuberculosis and in the treatment of TB, in my opinion as an epidemiologist, I think we are dealing with something that is in the area of less than 10 percent of our total activity.

Secondly, I think it would be very important for your committee members, if I might suggest it, Senator Hill, to read the report of the ad hoc committee of the Public Health Service on this whole subject because this committee has some of the leading men in the country in the field of BCG vaccination.

With your permission, I will submit it with the material.

Senator HILL. We will appreciate it.

Dr. HILLEBOE. This very plainly sets forth the views that we, as health officers, have on the use of BCG. I have had some first-hand experience with our Indians in Minnesota. I started out with Dr. Palmer on his initial work on BCG in Muscogee County. I helped him get going on his program among the nurses also in Puerto Rico.

VIEWS OF DR. PALMER

I think it is necessary to give such a man as Dr. Palmer an opportunity to present his views because this morning as I rode down to work with him I asked him if he had changed his ideas of the present status of BCG studies which he published in 1953.

He said, "Not at all. They are exactly the same." The third point is that these studies that he has submitted in Puerto Rico and Muscogee County do not indicate that tuberculosis in this country would be more effectively controlled by adding mass vaccination programs. [Reading:]

Muscogee County in Georgia may not be entirely representative of the whole country, but since the effect of the vaccination program there is imperceptible, there seems to be very little reason to expect different results in other communities.

I would like to point out one or two other things because I have been close to this problem. I speak as an epidemiologist. These are some things that the health officers have been doing.

I think I would agree with Dr. Riggins that in certain groups it is good to use BCG, the special populations in mental hospitals and other hospitals; this is quite correct. But so far as a big push on a program that would cost $2½ million a year, frankly, I must tell you that the State health officers do not wish to have $2½ million spent for that purpose.

RESEARCH AND INDIAN PROGRAMS PREFERRED

I polled the members this morning specifically and this is a very considered and carefully drawn out opinion of what our feelings are. There are many things that are being done. I would say if we are going to spend $2½ million, I would rather see you spend it on research and on some of the work on Indians.

In my considered judgment I would not care to have any part of that money in New York State. I think we can get along and do what we can.

The other point that I think must be made clear is that there are some things being done. We buy vaccine. We supply it to any hospital that wants it in New York State, any doctor. Frankly, we think its relative importance in the total program is so little that we think we should endeavor to do things in other fields where they would be more productive.

My final point is that I would like to hope that before you consider this, that you get the views of some of the top people in the country—Dr. Long, Dr. Palmer, men of this character—who have done the research themselves and can give you that side of the question.

As far as we are concerned as health officers, we will be delighted to express our views because we are the persons in the final analysis who will have to carry out the program. There are two sides to this coin and neither one is very shiny.

HOSPITAL FACILITIES

Another point I would like to make has to do with hospital facilities. I would like to submit the resolutions passed by our association last November in which we recommended a continuation of the program and if possible, the provision of an appropriation of $150 million annually under part C and $60 million under part G.

We think this is necessary and we are trying to be realistic. We do not think we should ask you for amounts of money that are not available. Some people have talked of billions of dollars and hundreds of millions. That is nice, but we must be realistic about this.

We think a realistic figure is $150 million for part C and $60 million for part G. We think, also, that if we had this, we could do some things in our States immediately to be of help in counter acting some of the things that have been discussed in relation to more funds.

I would like to mention briefly New York State. Actually, on the matter of specific projects, during fiscal 1959 and fiscal 1960 we have projects on the boards for around $202 million and we could use, if it was available, $67 million of Federal funds.

We know they will not be available, but we think with the total allotment of $210 million we could have about $11 million because New York State, as you know, pays for a lot of hospital buildings in other States.

If we could have $11 million, then we could get some of these things started and I think it would be a great help so far as the economy of the country is concerned and as far as meeting our needs.

This is the point that, realistically speaking, we would like to see something of that sort done. It is the hope of the association that the distinguished Senator from Alabama and his colleagues will seek approval of that full amount.

We think this is realistic. This is what we would like to see done.

FULL APPROPRIATION JUSTIFIED

Senator HILL. I will say, Doctor, you are very persuasive about seeking that full amount. I think you will find the chairman will be seeking the full amount.

Dr. HILLEBOE. I appreciate that.

Senator HILL. I am glad to have your testimony here on that.

Dr. HILLEBOE. Some people think this is a crash program, but this is not a crash program. It has been in successful operation for years, as you know.

Senator HILL. Our population has been growing all the time, too. The need has been growing larger and larger all the time.

Dr. HILLEBOE. I do not know any program that has even engendered as much good will toward the Federal Government as this one. Perhaps the only other one is the crippled children's program.

CONCLUSION

In conclusion, I would simply like to point out that these are a few of the areas where I have been concerned. We know that grants-in-aid for health have to be considered with grants-in-aid for other important things.

I think, however, one should look at the proportionate share for health compared to the education, road, and highway programs, the amount we are asking for is a little bit.

A few million dollars from the billions that are appropriated for these other grants, I think are legitimately things that we should have. I think I can say that the gap still remains wide between scientific knowledge and its application and maintaining and improving the health of human beings.

I think delay in early diagnosis is costly. The whole purpose of our program is prevention. What we are saying is that if you will give us some assistance to put with ours, with the amount of money we spend, which is many times over, we think we can do more preventive work and in the long run save you money and spend the money better that you give to us.

Senator HILL. You think it will bring good dividends?

Dr. HILLEBOE. I am sure it will. We can prove it without any question of doubt.

Senator HILL. Doctor, I want to again say I am sorry Senator Ives could not be here with us. I will tell him of your testimony and appearance, and I want to thank you very much.

Dr. HILLEBOE. It has been a privilege to appear before you.

(The prepared statement and other documents submitted by Dr. Hilleboe are as follows:)

STATEMENT BY HERMAN E. HILLEBOE, M. D., COMMISSIONER, NEW YORK STATE DEPARTMENT OF HEALTH, AND PRESIDENT, ASSOCIATION OF STATE AND TERRITORIAL HEALTH OFFICERS

I have been commissioner of health of New York State since June 1, 1947. From 1942 to 1947, I served in the Public Health Service, first as Chief of the Division of Tuberculosis Control and later as Assistant Surgeon General in the Bureau of State Services. From 1933 to 1942, I was chief medical officer of the Minnesota State Department of Welfare. It has been my privilege to serve on the expert committees of the World Health Organization and on the boards of national voluntary health agencies and health foundations. In 1955 I served as president of the American Public Health Association.

I am appearing before you today to present the views of the Association of State and Territorial Health Officers on the proposed appropriations for the fiscal year 1959 for grants-in-aid in health to the various States by the Department of Health, Education, and Welfare through the Public Health Service.

It is the opinion of our association that there are continuing Federal responsibilities in the broad field of public health; these include international and interstate health problems. The Federal Government has a role to play in demonstration, stimulation, and evaluation of new programs, especially in the chronic illnesses, virology, and in the fields of pollution of our water, air, soil, and food (including ionizing radiation). Because such problems cut across State lines and one State's responsibility cannot be isolated it is necessary for the Federal Government to be concerned with the recruitment and training of public health personnel to be used in State service, scientific investigations, and teaching. This concern also includes research in the basic and applied phases of our pressing public health problems; special attention needs to be given to new public health methods and the use of modern administrative management techniques in all health activities.

It must be stated unequivocally that unless Federal health grants have reasonable stability and allow for flexibility in their expenditure, they are of limited effectiveness and their benefits are mostly of a temporary nature. It takes time to recruit and train competent professional personnel. The shortage of personnel trained in public health remains acute. It should be evident to anyone familiar with the problem that it takes years to gain momentum in a program that involves changing the health habits and attitudes of large segments of the population.

At the outset, I should like to emphasize the fact that Federal grants-in-aid for health should not be reduced without a 2 years' grace period, to allow the States time to make appropriate budgetary and program changes. In no other way can States on a biennial budget make adjustments in State and local programs.

With these few brief general comments, I should like to discuss particular aspects of the proposed appropriation request for grants-in-aid for health for the fiscal year 1959.

You will recall that in fiscal year 1958 the sum of $3 million was added to the grants-in-aid for general health in order to develop new activities and extend and improve old activities, particularly in the field of chronic diseases. This was especially appropriate because of the increasing amount of chronic diseases among the members of our aging population. I have just reviewed some of the project activities in operation or planned for the various States throughout the Nation and I am very much impressed with the many new programs that have been developed. It is noteworthy that 75 percent of these funds have been budgeted for new projects.

I have the details for each State if you should like to have this information. I should like to point out that new Bureaus of Chronic Disease and Geriatrics have been developed in many States and, furthermore, these funds have made it possible to train health department staffs in the field of chronic disease and geriatrics.

New programs for diabetes detection have been established and are underway. It is interesting to note that among persons over 40 years of age (examined for diabetes by means of a simple screening method that involves pricking the finger for a drop of blood which in turn is examined in a machine that works almost automatically) it has been demonstrated that 20 out of every 1,000 such adults tested turn out to have diabetes mellitus. Ten of these twenty individuals did not know that the disease was present.

Screening programs for glaucoma have been initiated and are being carried on. Here again, interestingly enough, the figures are about the same as for diabetes detection in persons over 40. Twenty out of every thousand persons examined show evidence of glaucoma which, as you know, is a disease of the eyes in which the pressure within the eyeball is increased and unless treated usually leads to blindness among members of our aging population. If detected early, this disease can be treated and many of these people can have progress of the disease arrested and blindness prevented.

With the additional funds that have been made available under general health grants, public health work is going forward in nursing homes and homes for the aged in an effort to improve standards of care, to improve nutrition, and bedside care practices. In addition many of these older people, for the first time, are having rehabilitation experts brought to them so they can get out of bed and up in wheelchairs and, in many cases, are up again on their own feet to take care of themselves. These are the day-by-day services that go on usually unnoticed but that mean so much to the elderly individuals who have been afflicted with chronic diseases and whose remaining lives, short as they may be in some cases, are bleak indeed without such help.

New programs have been developed to help older people to avoid accidents in the home; this is done by health education, by home nursing visits, by means of group teaching, through movies, pamphlets, and exhibits. Fractures of the hip, which can be so disabling to older people particularly, can be prevented in many cases by exercising caution in the use of stairs and the bathroom. The best way to avoid long and costly care in such cases is to prevent the fractures from occurring. This is the principal purpose of public health—to prevent occurrence of disease and disability.

New programs of health education involving community organization of health resources and the use of mass mediums have been developed with the new general health grants. Additional laboratory services have been made available for the diagnosis of diseases such as viral infections that require careful laboratory study of specimens by highly competent personnel.

Many of these funds have been used to extend rehabilitation to disabled persons who come to the attention of health departments through public health nursing services. In some instances programs have been developed, in cooperation with the departments of welfare, for the rehabilitation of disabled welfare recipients. For example, in New York State, we have a pilot project in operation for the rehabilitation of disabled welfare recipients. Through July 10, 1957, a total of 253 patients were admitted to the rehabilitation hospital at West Haverstraw, N. Y., under this project. One hundred and ninety of these patients have been discharged and the results are measurably worthwhile. Bear in mind that these

people were taken from the public assistance roles and had been classified as permanently and totally disabled and were on monthly pensions averaging $85 per person. We have over 40,000 such persons in New York State and anything we can do to reduce this expenditure of over $40 million per year (paid out of Federal, State, and local taxes) would certainly be worthwhile.

The 3 major diagnostic groups were as follows: (1) disability following arthritis, (2) cerebrovascular accidents (strokes resulting in hemiplegia), and (3) traumatic transverse myelitis (injury to the spinal cord resulting in paralysis of 2, 3, or 4 of the limbs). These diagnostic categories alone constitute two-thirds of the cases. Another large group consisted of disabilities from fractures that did not unite, particularly in older persons.

Among the first 150 persons discharged—I can assure you that these were some of the most disabled people that I had seen for sometime—32 showed marked improvement, 49 showed moderate improvement, and 33 slight improvement after a period of intensive rehabilitation. On admission, 40 percent of the 150 patients were bedbound and on discharge only 9 percent of these patients were bedbound. There were only 31 patients out of the 150 who were ambulatory on admission; this was increased to 58 on discharge. It is interesting that 25 percent of this group were considered capable of sheltered workshop activity or its equivalent in the home at time of discharge, compared to only 14 percent on admission. Sixteen percent were considered capable of full-time employment with special arrangements on the job as compared with 6 percent on admission. Fifteen percent were capable of full-time competitive employment after rehabilitation as compared with 6 percent on admission. This gives you an idea of what can be accomplished by concentrated rehabilitation services which take advantage of all the resources in a community. These resources, of course, must be exploited by public health personnel who are trained to seek out the disabled and to persuade them to take advantage of treatment facilities.

Some of the general health funds have been used for new activities and for improvement of existing activities in the important field of radiation health. Recent developments in the atomic energy field and the increasing use of radioactive materials and radiation equipment have made it mandatory that health departments develop programs to control ionizing radiation. Health departments have no choice but to prepare now to meet one of the most important environmental health problems of the future.

In the past the hazards associated with polluted water, contaminated food and milk supplies were present and known to us at the time we planned programs for their control. Because of this we thought largely in terms of corrective measures in many situations while the damage was still going on. However, in the field of radiation hazards, this is not the situation. The only possible way to carry out a program against radiation hazards is in the prevention of their occurrence. To wait until damage has been done is too late.

We have no means to make atomic wastes innocuous and these wastes will continue to accumulate in our environment. Accordingly, health authorities must make certain that they accumulate in a manner which is not detrimental to our welfare. It is true, also, that improved diagnostic techniques in the medical field are using powerful X-rays in a more widespread manner. Their benefits must be evaluated in terms of potential radiation injury. Obviously, we do not want to curb the use of proper use of professional techniques providing the benefits outweigh the tissue injury that might result.

It is important, not only for the State health departments to extend their activities in this field but also for the United States Public Health Service to give the leadership and guidance that is so important on a problem of national magnitude. Certainly in this area there is a large Federal responsibility. There are many practical questions to which the answers must be found before a strict radiation protection program can be initiated and carried out. We need to know more about what radiation hazards exist, where they exist, and why. We need to know more about the groups directly affected and to what degree. Now is the time to develop a preventive program. Again, I must emphasize that we cannot wait until the damage has been done; at that time it will be too late to be of help.

Here is a task of tremendous proportions and of immense complexities. Our only hope is to prevent, reduce, and eliminate when possible, unnecessary exposure to ionizing radiation in the environment where people live, work, and play. The protection of the public against ionizing radiation from X-ray and radium producing equipment, industrial installations, radioisotopes, and the possible use of atomic weapons, is a problem that should concern every State and local health department and all the health resources of the Federal Government.

The public health profession shares the responsibility to keep the amount of radiation in the environment at a minimum at all times, to reduce the threat to the health and life of all our citizens. We in public health have the special talents and tools to attack problems of this magnitude and character, and we are prepared to share these resources with all other governmental agencies and private groups that face this growing problem.

I recommend that the United States Public Health Service be amply supported in its request for funds to carry on work in the field of radiation health. This is certain to be one of the most important public health activities of the immediate future.

INDIAN HEALTH

In the 3 years since the United States Public Health Service assumed responsibility for Indian health, a remarkable record of progress has been achieved in improving the health of the Indian population.

Deaths among American Indians from tuberculosis, which for decades was the leading killer in the Indian population, have been cut by 25 percent. Among Alaska natives the tuberculosis death rate had been cut by 57 percent. When the Public Health Service took over this program, there were 2,500 Indians and Alaskan natives who needed hospital care for tuberculosis and for whom there were no hospital beds. Today, there is no waiting list; there are actually some vacant tuberculosis beds.

There has been a cut in the infant death rate by 17 percent. Deaths from gastroenteric diseases, which claim the lives of many Indian infants, have practically been cut in half since 1955.

These gains could not have been made without the increases in funds provided for the Indian health program since 1955, and without intelligent and effective use of this money.

In spite of the difficulties of recruiting professional personnel for work in isolated areas, the number of physicians has been nearly doubled, to a total of 230. Before the Public Health Service took over, half of the 56 hospitals had only 1 doctor each. Nearly all of the hospitals now have at least two doctors, and many of them have more.

The number of public health nurses working directly with the Indians in their own homes and communities has been increased by one-third. The number of dentists has been nearly doubled, and the sanitation staff has been more than doubled. The medical social work staff, which in 1 year facilitated the discharge of 250 chronically ill patients who no longer needed hospital treatment, has been increased from 8 to 21. To help Indians gain the knowledge needed to ward off disease, 28 community workers (health) have been added. To increase safety, effectiveness, and economy in the use of drugs, the number of pharmacists has been increased from 7 to 32. Nutritional health services which previously were unavailable in the program are being developed; in addition, the number of hospital dietitians has been increased from 16 to 24.

A substantial number of the 900 employees added since the transfer of this program to the Public Health Service are of Indian descent. The Service has greatly accelerated the training of Indians to provide health services among their own people. Nearly 400 Indians have been trained in such specialities as sanitarian aid, practical nurse, dental technician, and community health workers.

Response on the part of the Indians to improved health services is reflected by their increasing use of these services. Hospital admissions are increasing at a rate of 15 percent a year. Therapeutic and preventive services at hospital outpatient and related field clinics increased 17 percent last year.

The Public Health Service must be given the means to continue developing an Indian health program adequate to meet the tremendous health needs of the Indians. Moreover, additional resources needed must be based upon the rapid increases (2 percent a year) in the Indian population, and the continuing increases (5 percent a year) in the costs of medical care.

Further improvement will be limited unless prompt steps are taken to provide more adequate staff housing, additional health personnel to relieve the pressure on overworked hospital and clinic staffs, and additional staff and resources for prevention of disease and disability.

We still have a long way to go before the health of the Indians will approach that of most Americans. The average age at death of Indians is only 39, compared with 61 for the general population, and death rates among Indians from major categories of disease still far exceed comparable rates in the population as a whole. Although great strides have been made in improving the lot of the Indians, much remains to be done. Money spent for preventive services now will avoid greater expenditures for treatment of advanced disease in the future.

TUBERCULOSIS CONTROL

In the grants for health services for the fiscal year 1959, as included in the President's budget, there are particular items on which the Association of State and Territorial Health Officers wishes to present its views. I should like to discuss first the drastic reduction in funds for tuberculosis control from the fiscal year 1958 figure of 7.0 million to the proposed 5.386 million for fiscal year 1959. The effect of this reduction would be to cut the grants for tuberculosis control from the fiscal year 1958 figure of 4.5 million to 3.0 million for fiscal 1959, a cut of 33⅓ percent. From other speakers who have appeared before you, your committee is quite familiar, I am sure, with the importance and financial burden of tuberculosis as a communicable disease in the Nation. It is far from being under control even in States such as New York where we spent over $40 million last year of State and local funds to combat its devastations.

Of utmost concern to all of us is the effect of the proposed cuts on the individual States where tuberculosis control work is planned and actually carried out in cooperation with the local health departments and tuberculosis associations. On February 12, as soon as I had learned that I would have the privilege of appearing before your Subcommittee on Appropriations, I wrote to each of the State and Territorial health officers to ask them what would happen to their tuberculosis control programs if the 33⅓ percent cut were to remain.

In the period up to February 21, I had received replies from 40 health officers, every one of whom would be hurt and some badly crippled in their efforts to control tuberculosis in their States. I have summarized these replies and included these summaries in my remarks. I would like to give you a few examples of the irretrievable harm that will be done if grants for tuberculosis control are cut by 33⅓ percent. The brief summaries by States follow:

Alabama: Lessening of program when we need to expand. Need more hospital facilities and more casefinding.

California: Reduce funds available to local health departments for all forms of public health services for tuberculosis control.

Connecticut: Fifty percent decrease in statewide diagnostic laboratory facilities. Dr. S. H. Osborn, from a "long-range viewpoint would reverse current downward trends in morbidity and mortality."

Florida: Would have to eliminate 1 or 2 mobile casefinding units and would increase the vacant beds in their hospitals.

Illinois: Dr. R. R. Cross, "extremely poor time to curtail health activities which will directly affect the families of those who have recently joined ranks of unemployed." There is known higher incidence of tuberculosis among lower income groups. Reduction of funds would reduce casefinding activities in Illinois.

Maryland: The reduction in funds will reduce all services for tuberculosis control, especially casefinding and followup. Dr. Hetherington, chief of tuberculosis control, says that this reduction will be a catastrophe when you consider Maryland ranks fifth in number of new cases and seventh in death rate for the United States.

Massachusetts: Boston has highest death rate of any city over 500,000 in the United States. Would drastically reduce casefinding; cut down laboratory examinations for tuberculosis and training programs would stop. Dr. W. H. Weidman, director of tuberculosis control, "public health problems in tuberculosis control are increasing rather than decreasing and are more expensive than formerly."

Minnesota: Dr. R. N. Barr, "proposed cut in funds would seriously reduce laboratory and followup programs. Tuberculosis remains the major communicable disease in Minnesota."

New York: Cut down industrial casefinding in cooperation with Department of Labor, also in large cities with high incidence. Cut down community surveys and hospital admission examination programs. State spends these Federal funds to help provide casefinding and followup services. There would be a 32 percent decrease in casefinding program.

North Carolina: Would reduce casefinding mobile units from 6 to 4. 250,000 films taken a year in last 5 years—1957 in 35 counties—would cut number X-rayed to 150,000 per year. Would cut aid to chest clinics now operating in 23 counties and reduce services.

Oklahoma: Drastic reduction or abolishing mobile X-ray and survey activities. Reduction is supplying drugs for prophylaxis and treatment (of most post-sanatorium patients).

Pennsylvania: Would reduce chest X-ray casefinding by 166,000 X-rays—out of 697,000 in 1957—one quarter.

South Carolina: Reduce casefinding program—1 of 2 mobile units would stop. Chest clinics in rural and isolated areas would close. Nursing supervision of active cases seriously handicapped. Dr. G. S. T. Peeples, "tuberculosis continues to be one of our major health problems in South Carolina, and We can ill afford to relax our educational, casefinding, treatment and followup activities."

Tennessee: Curtail casefinding program, would lose 2 of 8 mobile units, reduce 25 percent on X-rays. Decrease services of specialized tuberculosis nurses. Tennessee still has considerable amount of tuberculosis.

Texas: Major source of cases come from persons over 65 and Spanish speaking people along the border. Treatment and control measures for migrants is particularly difficult. Reduction in funds will mean reducing casefinding programs. Texas will have a tuberculosis problem for some time in the future because of the complexity of the problem in a border State.

Wisconsin: One of 3 mobile units would go out of operation—cut down by 52,000 casefinding examinations—270 tuberculosis, 15 cancer of the lung, 600 heart disease, one-half of which are not known to examinees would go undetected.

It is clear from the evidence presented by the state health officers themselves, that a cut in tuberculosis control funds would have a harmful effect on State and local programs. What is not so quickly apparent is the threatened loss of professional and technical personnel if Federal funds are suddenly stopped. Once these scarce personnel are gone and have taken up new jobs, they don't come back again. Control programs that are slowed up or forced to stop take years to gain momentum again.

Twenty-one of the forty health officers who wrote to me said that their legislatures won't be in session until 1959, so there is no possible source of State funds to pick up the slack. Frankly, it is not only uneconomical but unfair for the Federal Government to discontinue a going concern without giving the operators of the enterprise an opportunity to make adjustments.

The State and Territorial Health Officers went through this kind of an experience in 1953. It was costly and wasteful in loss of professional talent and program development, and Federal funds were restored after the damage had been done. Does our Government have to keep on making the same costly mistakes, especially when comparatively small amounts of money are involved, in this case, $1.5 million.

The State and Territorial Health Officers are quite ready and willing to sit down with the Department of Health, Education, and Welfare and the United States Public Health Service and try to work out a mutually agreeable procedure of changing the pattern of grants-in-aid for health. It should be possible to make changes that permit adjustments without wrecking control programs. A shift from Federal to State responsibility requires at least 2 years because many of the State legislatures meet only once every 2 years. Why have such precipitous action, with its attendant widespread animosity toward the Federal leadership, when the transition in source of funds could be made in an orderly manner at the proper time, based upon the health needs of the people?

In may States it has been possible to close tuberculosis hospitals during the past few years because of the decreased number of bed patients requring hospital care. This is tangible evidence of the effectiveness of a balanced control program which includes early casefinding, adequate treatment in the hospital, followup in the clinics and the home and rehabilitation wherever it is needed. The major savings, therefore, are being made in decreasing hospital beds. But let me point out that even though a hospital is closed it is necessary to maintain the followup services to assure that arrest of the disease is continued. It is mainly for the diagnostic services and the followup that Federal funds are used and these are the types of services for which it is most difficult to obtain State and local funds. This is largely because of the tremendous State and local tax burden required to provide expensive hospital care. The Federal Government, in reality, shares only a small proportion of the total cost of the tuberculosis control program in the United States, but this part is essential for control.

Tuberculosis remains the principal communicable disease problem in the United States today. We cannot let down our guards. We've got the disease on the run and we must keep up our drive or lose much of the principal that has been invested. The spreaders are more difficult to find and the disease still resists being kept under control in the individual, as the death rates and new case rates go down. We don't cure tuberculosis, we only arrest it because the resistant organisms lie hidden in the body for years and decades. Tuberculosis patients must keep under the surveillance of their doctors all their lives. This is a dangerous adversary we are dealing with; we have to keep up a relentless attack.

I respectfully request that your subcommittee recommend the restoration of the $1.5 million for grants for tuberculosis control in the budget for fiscal 1959 so that we can get on with our job of bringing tuberculosis deaths and new cases down to an irreducible minimum as promptly as possible.

HOSPITAL AND MEDICAL FACILITIES PROGRAM

First of all, I should like to submit a copy of Resolution No. 3 passed by the Association of State and Territorial Health Officers at its annual conference in November 1957:

"RESOLUTION NO. 3—EXTENSION OF THE HILL-BURTON PROGRAM

"Whereas the Hill-Burton program is contributing significantly to the betterment of the health of the people of the country but its objectives of bringing hospital service to all the people of the States has not as yet been achieved; and

"Whereas during the past decade the hospital and medical facilities survey and construction program has proven to be a most satisfactory joint State and Federal endeavor, but its original goals for alleviating the Nation's hospital bed deficiencies have not been achieved because of (1) increased construction cost since 1946, (2) the progressive obsolescence of existing hospital facilities during this period of rapid technical advancement, (3) the Nation's rapid population increase, (4) the significant increase in the older age portion of the population, requiring more long-term hospital care, and (5) the increased accessibility of hospital care resulting from the phenomenal growth of prepayment hospital-service programs; and

"Whereas, when measured by present standards of need for the Nation's increased population, the net gain in hospital and related facilities since the beginning of the Hill-Burton program has been only 1 percent annually from the deficit when the program was established; and

"Whereas there thus continues to exist a serious bed shortage, particularly in general hospitals and in facilities providing care for mental and long-term patients; and

"Whereas this program while primarily designed to provide more adequate facilities has also exerted and continues to exert a significant influence upon the improvement of the quality of medical and public health services, and

"Whereas the action of the 84th Congress extended the duration of the program only to June 30, 1959, by which time the objective cannot be realized: Therefore be it

"*Resolved by the Association of State and Territorial Health Officers at its annual conference with the Surgeon General assembled November 3–8, 1957*, That the hospital and medical facilities program be extended at this time for an additional 5 years, to provide an appropriation of $150 million annually under part C and $60 million under part G, through June 30, 1964.

"*Resolved*, That a copy of this resolution be transmitted to the Surgeon General, to the Secretary of the Department of Health, Education, and Welfare, and to the appropriate congressional committees concerned with such legislation."

It was the unanimous opinion of the membership that the Hill-Burton program be extended in time and expanded in funds to meet the growing health and hospital needs of the people of our country.

You are familiar with the details of the needs for hospital beds on a national basis from the testimony of representatives of the Public Health Service. In addition, Dr. Robert N. Barr, secretary of the Minnesota Department of Health, will appear before your subcommittee and present his views as they affect Minnesota. I will not discuss the total problem at this time.

Yet it is appropriate, I believe, to give you a brief description of the situation as we see it in New York State, where I serve as chairman of the Joint Hospital Survey and Planning Commission as well as commissioner of health. This program has given tremendous impetus to our hospital construction work in the years 1948–57. In this short period, there have been constructed a total of 43,929 beds of all types; 8,936 were built with Hill-Burton aid. By the end of 1957, our commission had approved 138 general hospital projects at 119 different facilities. Ninety-five hospitals are now in operation, 23 under construction, and 20 in the design stage. The total cost of these projects amounts to $181,051,494, of which $46,535,310 were Hill-Burton funds. It is significant that 89 percent of these Hill-Burton funds were distributed to voluntary nonprofit hospitals.

Aside from the incalculable benefits to the local communities, the carefully planned expenditures of these Federal funds have resulted in a tremendous amount

of good will among citizens toward their Federal Government—and this good will is permanent and continues on long after the money has been spent. Let me point out, also, the beneficial effects of hospital construction on employment and the general economy during these uncertain times. Many industries are affected, especially those producing the diversified equipment and supplies that hospitals require.

But where do we stand now and what remains to be done to provide adequate hospital and associated facilities for New York State? On February 1, 1958, we had 93 proposed projects of potential local application for Federal aid for construction of hospitals and related (medical) facilities which might be expected to proceed to construction in the Federal fiscal years 1959 and 1960. The estimated cost of these projects is $202,468,796, and the Federal share, if available, would be $67 million. The amount of Federal funds available for construction will largely determine the scope and speed of our ongoing hospital construction program.

No one can dispute the fact that health is a national resource essential to keeping our defenses strong. Hospitals comprise an integral part of our health resources and their construction has national as well as local implications. Some communities can provide their own hospital facilities; others require State aid, still others would not be built without Federal assistance. New York is one of the richest States in the union, yet we have needed Federal aid for building hospitals during the past 10 years. Many hospitals in New York would not be operating today and caring for the sick, both rich and poor, if there had been no Hill-Burton program.

Because of its comparative wealth, as measured by the annual per capita income, New York does not receive its proportionate share of Hill-Burton funds, when you consider the size of our population and the national income we produce and the Federal taxes we pay. Yet we realize that someone must share the burden of cost of poorer States if we are to be strong and healthy as a Nation and maintain our position of leadership in a free world. The Hill-Burton program is a powerful instrument for sharing the cost of construction of hospital and ancillary medical facilities in our country. It has stood the test of time and is a credit to the statesmen in our Federal Government who made it possible. It should be extended and expanded to meet the vital health needs of our growing Nation.

A proportionate share of Federal funds that may be appropriated during the coming months to combat increasing unemployment and to bolster our economy could well be spent to build local hospitals and health centers to meet the health needs of all our people.

As you know, the President's budget for the fiscal year 1959, after adjustments, includes $120 million for Hill-Burton Act allocations. But the legal limit for annual appropriations is $150 million under part C and $60 million under part G, or a total of $210 million.

It is the hope of the Association of State and Territorial Health Officers that the distinguished senior Senator from Alabama, Mr. Hill, and his colleagues, will seek approval for the maximum appropriation of $210 million for fiscal 1959.

This is not a crash program. It has been in successful operation for several years. It has been tested and found to be of tremendous benefit to the people of America. Its expanded activity can be implemented readily, giving jobs to many types of workers, bolstering our national economy and, most important of all, helping communities to give a high quality of care to their sick.

We earnestly solicit your serious consideration of our request.

CONCLUSION

In conclusion, I would like to point out that grants-in-aid for health comprise one of the smaller items in the appropriations request for major Federal-aid programs. When we look at the Federal-aid appropriations for fiscal year 1958 to the Department of Agriculture for extension work and school lunches, to the Commerce Department for airports, to the Bureau of Public Roads for highways, to the Department of Health, Education, and Welfare for schools, and to the Housing and Home Finance Agency for low-rent public housing funds, the request for health funds is indeed modest.

A few million dollars spared from some of these vast Federal-aid programs that run into several hundred millions of dollars a year would be sufficient to carry on the tuberculosis control, the hospital construction program, and other public-health activities at levels commensurate with demonstrated needs.

All of these other Federal-aid programs mentioned are undoubtedly important and one would find great difficulty in saying that one was more important than another. Yet it cannot be denied that health is one of the more important of our national resources essential for the defense of our country. All we ask as the guardians of the public health is a proportionate share of the Federal grants-in-aid that are distributed.

The Government spends millions of dollars of Federal funds each year in keeping our Armed Forces in health and rightly so. It is also important, however, to keep our industrial workers and their families in the best possible health so that the workers can produce the materials that are necessary to back up our Armed Forces and to defend our country.

It is a singular fact, often overlooked, that much of the grants-in-aid for health moneys are spent mainly for preventive services. Certainly this is a form of insurance for the billions of dollars that are spent annually for medical care from all sources. We must not relax our efforts in the prevention of disease and disability. Prevention is the only way of reducing, within the foreseeable future, the billions of dollars spent annually, just to provide medical care of those already sick or disabled.

The gap still remains wide between scientific knowledge and its application in maintaining and improving the health of human beings, including those in our own country as well as those of other less fortunate lands. Delay in early diagnosis is costly; delay in treatment and maximum rehabilitation—not to forget the incalculable personal suffering and hardship—results in decreased productivity, economic instability, and lowered standards of living. Millions of people are ill from diseases and disabilities that are preventable. The cost of this collective illness heavily burdens not only the individual but the family and all units of government as well.

Federal grants-in-aid for health play an essential role in the improvement and extension of our preventive services. Accordingly, I respectfully request that your subcommittee recommend the necessary appropriations so that grants-in-aid for health may be continued at a level commensurate with demonstrated needs. Thank you.

[From the American Review of Tuberculosis and Pulmonary Diseases, vol. 76, No. 5, November 1957]

Report of Ad Hoc Advisory Committee on BCG to the Surgeon General of the United States Public Health Service

A committee invited by Surgeon General Leroy E. Burney, to examine the Public Health Service policy and program in the field of BCG vaccination, met in Washington, June 14, 1957. Dr. Otis L. Anderson, Chief of the Bureau of State Services, acting as the Surgeon General's representative, asked the committee to formulate a new statement and make new recommendations, if it seemed appropriate, on the use of BCG vaccination as a public health procedure and on further research as to its value. At Dr. Anderson's request the committee selected one of its own group as chairman of the meeting.

A previous advisory committee considered the question of BCG vaccination in September 1946, and a statement on the use of BCG, consistent with the recommendations of that committee, was issued by the Public Health Service in August 1950. In this statement the Public Health Service took the position that additional research on the effectiveness of the vaccine was required, that ndiscriminate use of BCG might divert attention from other control measures, that mass BCG vaccination programs were not indicated in this country, and, finally, that vaccination should be limited to persons with unusually great exposure to tuberculous infection.

It appeared to the present committee that a logical evaluation of BCG vaccination and the formulation of recommendations on the policy of the United States Public Health Service could be made only after consideration of (1) the present status of the tuberculosis problem as a whole, (2) facts on BCG vaccination that have become available since the last statement issued by the Public Health Service, (3) the contribution that might be expected from BCG in diminishing the problem in the light of the new facts, and (4) the advantages and disadvantages of various public health applications of BCG.

The committee recognized that nearly all aspects of the tuberculosis problem have undergone great changes during the past decade. The mortality rate has decreased from about 30 per 100,000 in 1946, when the previous advisory com-

mittee met, to less than 10 in 1956. The morbidity rate has also declined, although apparently not so rapidly. At the same time the consequences of tuberculosis morbidity have been lessened by the effectiveness of the antimicrobial agents, particularly isoniazid. The committee members agreed that further research on the effectiveness of antimicrobial drugs in first infection is desirable. It was noted that the infection rate, as reflected in numerous tuberculin testing surveys, has reached a new low. While precise information is not available, it is probably safe to say that in the United States as a whole less than one-half of 1 percent of the population are being newly infected with tubercle bacilli each year, although the rates are higher than this in certain areas. However, the available evidence indicates that in all areas the risk of infection is decreasing at an accelerating rate.

The basic premise for use of BCG vaccine is that the changes produced in the host by vaccination will protect in some measure against the hazards resulting from tuberculosis infection. It is generally accepted that vaccination confers no benefit on persons who have already been infected, and that its use should, therefore, be restricted to noninfected persons, i. e., nonreactors to tuberculin. If, as widely believed, the protection afforded by vaccination tends to wane with the passage of time, the ideal period for vaccination is a few months prior to exposure to tuberculosis. Ordinarily it is not possible to predict exposure so accurately; in certain occupational groups, on the other hand, probable exposure can be assumed.

When vaccination is offered to general population groups, it has been customary to limit it to the younger segments, in which there has been as yet little opportunity for infection. In practice, vaccination is carried out after tuberculin testing. Among the very young, in the United States, the frequency of reaction to tuberculin is low, and lowest in these in an environment in which exposure is minimal. Since in the early years of life substantial changes in environment are relatively infrequent, freedom from exposure in the immediate future can be predicted for the majority of those found negative. In older age groups subjected to tubercular testing, the proportion of reactors to tuberculin is usually higher, so that fewer persons in the group are eligible for vaccination. Recent well-controlled studies have shown that, with the passage of time, tuberculous disease is more likely to develop among those found positive at the time of tuberculin surveys than among those not reacting. In other words, the greatest hazard in a survey group at any age exists among those found positive to tuberculin and who, therefore, would not be vaccinated. It was pointed out that, accordingly, chief attention from the point of view of tuberculosis control should be devoted to those found to react to tuberculin in any survey.

It was recognized as obvious, however, that any measures that could be taken to prevent development of infection in the first place should be part of every tuberculosis program.

The value of BCG vaccination in controlling tuberculosis in the United States has been a matter of controversy in recent years. The committee recognizes arguments both for and against its more general applications. Several studies have brought forth convincing evidence that vaccination in man with a strain of BCG known to be of high potency leads to some degree of increased resistance against tuberculous disease. The duration of such resistance has not been defined, but several reports indicate a lower incidence of development of tuberculosis in vaccinated than in control groups several years after vaccination. It has been postulated that in such groups the effect of vaccination is reinforced by subsequent small spontaneous infections which the vaccinated persons overcome. The committee noted, however, that accurate studies have not been made on the efficacy of revaccination with BCG, and believed that, on the whole, present information is inadequate on the persistence of increased resistance from BCG vaccination. The members believed that BCG appears to be as safe as other vaccines in common use, but noted that several cases of progressive disease and death attributable to BCG have been reported.

In considering disadvantages attendant upon use of BCG vaccination, the committee members stressed the value of the tuberculin reaction as an index of exposure to tuberculosis. Since BCG vaccination, in order to be considered satisfactory, converts nonreactors into reactors to tuberculin, the procedure makes it impossible to use the tuberculin test (1) as evidence of recent infection in the individual, (2) as an index of infection in population groups, (3) for the location of sources of contagion, (4) as a preliminary screening device prior to chest roentgenographic examination in the diagnosis of tuberculosis, or (5) for differential diagnosis in diseases with some similarity to tuberculosis.

These considerations were believed to be of increasing importance in the light of the current continuing decline in the prevalence of infection and manifest increasing concern over the hazards of excessive radiation by X-rays. The committee agreed that, if the protection afforded by vaccination were absolute and persistent, the loss of the tuberculin test for all these purposes would be outweighed by the protective effect of the vaccine, but since all studies indicate that the protection is imperfect, the loss of the index value of the tuberculin test appeared significant.

The committee expressed the opinion that vaccination may lead to a false sense of security which could result in failure to observe precautions that otherwise would be taken.

The committee gave careful attention to the numerous investigations carried out since the 1946 conference on BCG vaccination, which have shown a wider range of variation in the reported efficacy of BCG than was evident at that time. A range of efficacy from 0 to 80 percent among study populations eligible for vaccination has been reported from various controlled studies. It was noted that in almost all of the several reports on the followup of large groups of persons vaccinated with BCG some cases of disease and death from tuberculosis are recorded among vaccinated persons. In one of the studies in which the highest efficacy was recorded, the investigation reported by the Tuberculosis Vaccines Clinical Trials Committee to the Medical Research Council in Great Britain, in which vaccination was carried out with the Danish official BCG vaccine, there were 13 cases of definite tuberculosis in a vaccinated population group of 14,100 within 2½ years after initiation of the followup. In the United States Public Health Service investigation in Puerto Rico, carried out with the BCG vaccine produced by the New York State Department of Health, 78 cases of tuberculosis occurred among approximately 50,000 vaccinated persons in 5½ years. These figures indicate that the degree of protection afforded by the vaccine is far from absolute. In the Medical Research Council study, the morbidity rate among the vaccinated was only one-fifth of that reported for a nonvaccinated group of 13,200 studied concurrently; in the Public Health Service study, the rate was two-thirds of that recorded for some 27,000 controls concurrently studied. A striking finding in both studies was a high subsequent incidence of tuberculosis morbidity in persons strongly sensitive to tuberculin at the time of survey who were not eligible for vaccination and therefore not in either the vaccinated or the control group.

Of equal pertinence to the task of the committee were the results of the Public Health Service's trial of BCG vaccination in Muscogee County, Ga., and Russell County, Ala., in which vaccination was carried out with the BCG vaccine produced by the Research Foundation in Chicago, Ill. In this community study, there was no statistically significant difference in the tuberculosis developing among vaccinated and nonvaccinated persons after 6 years of observation. Furthermore, the tuberculosis that developed among persons who were eligible for vaccination by the ordinary criteria was an extremely small fraction of the total tuberculosis problem of the community during the followup period.

The members of the committee were particularly impressed by the apparent variability in vaccinating potency of different BCG strains, as shown by laboratory studies as well as by the diversity of results in large field trials. It was noted that critical analytical studies have been made of the value of only a small number of the lots of BCG vaccine that have been used, and that no agreement has been evident as yet in different research groups on the choice of BCG strains for vaccination. It was believed that the significance of apparent variations in potency of strains, with respect to the induction both of tuberculin allergy and resistance to infection, is not yet understood, and that the implications of such variations have not yet been taken sufficiently into account in current studies. As one member of the committee expressed it, "The label 'BCG' does not define a product of predictable and standard properties and activity."

In considering the public-health aspects of BCG vaccination programs the committee noted that the tuberculosis mortality rates for the white population in the United States, in which vaccination has been practiced on a very small scale only, are much like those in white populations abroad, in which vaccination has been carried out on an extensive scale. They were even more impressed by the fact that reductions in mortality have been as great in certain European countries that do not practice BCG vaccination as in countries of comparable size and economic state in which BCG vaccination is widely used.

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With all of these considerations in mind the committee did not believe that a categorical statement on the degree of protection afforded by BCG vaccination could be made.

The committee, while unanimously agreeing that BCG confers some protection against tuberculosis, considered at length whether or not the amount of protection provided by vaccination is sufficient to justify greater use of BCG in the United States in the light of current general progress in tuberculosis control and in the face of the several disadvantages noted. In the absence of consistent and convincing evidence of persisting protection and in the light of a greatly decreased risk of infection and its consequences, the committee expressed the opinion that the use of BCG should be determined by the particular circumstances obtaining in a local community or population group. This determination should be based on a wide variety of factors, among the most important of which will be the strength of the tuberculosis program as a whole, the prevalence of tuberculosis in the community at the time, and the probable risk of infection in the future. In general, the question will come up for decision chiefly in groups or communities where exposure is high and weakness in other means of control is recognized. It was believed by the committee that the responsible officials in such communities and groups should be sufficiently well informed on the advantages and disadvantages of BCG vaccination, through currently available reports, to make an intelligent decision.

The committee is convinced that large-scale BCG vaccination programs, including routine vaccination of the newborn, are not indicated in this country. It is believed, however, that the advantages of vaccination outweigh the disadvantages for tuberculin-negative persons who are exposed to a definite risk of infection, especially if they cannot be retested frequently with tuberculin. Under certain local circumstances, the following individuals and groups are examples of suitable subjects for BCG vaccination:

1. Physicians, nurses, medical and nursing students, laboratory workers, and hospital employees. (It was noted, however, that if a hospital has established an adequate tuberculosis-control program very little exposure to tuberculosis will occur in that institution.)
2. Persons unavoidably exposed to continued contact with infectious cases of tuberculosis in the home.
3. Patients, inmates, and employees of institutions such as mental hospitals and prisons, in which case-finding programs indicate that exposure to tuberculosis is likely to be high.

The committee noted the fact that in September 1956, after review of material similar to that studied by the present committee, the committee on administrative problems of the American Trudeau Society decided that the current statement of the society, formulated in April 1949, was not in need of revision. That statement recommended use of BCG vaccine in groups similar to those listed in the foregoing paragraph, and recommended continued emphasis on general measures of tuberculosis control. The committee noted other recent statements of similar import by a number of investigators and groups with long experience in BCG vaccination.

The committee finally considered the desirability of further studies in the field by the Public Health Service. It is the consensus of the committee that, in view of the apparent low risk of tuberculosis among present nonreactors in the United States, new investigations on the value of BCG cannot be made without excessively large study populations. For this reason, the committee believes it is unwise to recommend that the Public Health Service initiate new vaccination trials. However, it recommends strongly that the controlled studies on population groups already started be carried on for as long a period as they furnish significant information on the rates of development of tuberculosis in the vaccinated and control groups now under observation.

René J. Dubos, Herman Hilleboe, Horace L. Hodes, Walsh McDermott, Gardner Middlebrook, Rufus Payne, James E. Perkins, Leon H. Schmidt, Jacob Yerushalmy, Esmond R. Long, Chairman.

SEPTEMBER 25, 1957.

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Present Status of BCG Studies [1]

Carroll E. Palmer and Lawrence W. Shaw

At the annual meeting of the National Tuberculosis Association 3 years ago, Dr. Robert Anderson [2] discussed the attitude of the Public Health Service toward BCG vaccination. He pointed out the wide differences of opinion on many questions about BCG and its use; the recurrent theme throughout his talk was how little was really known about BCG—how little solid evidence there was amid all the claims and counterclaims of its value.

Because of this, Dr. Anderson said, the Public Health Service could recommend the use of BCG only for selected groups with known high risk of exposure to tuberculous infection. Tuberculosis had been declining sharply for many years and there was no reason to think that it would not continue to decline, perhaps even more rapidly. Moreover, it was not clear that the advantages of using BCG would outweigh the disadvantages of losing the tuberculin test as a diagnostic and case-finding tool. It was believed that mass vaccination programs in this country could be justified only for the purpose of making carefully documented studies to determine the value of BCG in tuberculosis control.[3]

That was not a recommendation to be made lightly, in the face of strong popular belief in BCG and its widespread use abroad. It was not a recommendation which could be made without an obligation to make known any indication that it should be changed. Nevertheless, about the only reason for changing the recommendation would be decisive evidence of the effectiveness of BCG in human beings. A number of groups in different parts of the world, including the Public Health Service, are actively trying to find such evidence. It is the purpose of this report to describe very briefly the several large-scale evaluation studies undertaken by the Service and to present the first preliminary results of these studies.

In planning the studies, decisions were required on several critical issues.

Of primary importance was the conviction that it was absolutely necessary to have control studies in which vaccination would be deliberately withheld from a randomly selected part of the population found eligible for vaccination. The effectiveness of BCG would be measured by comparing the rate of tuberculous infection in the two comparable groups, the one vaccinated, the other not vaccinated. An alternative, to vaccinate all who were eligible and expect to measure the effect of vaccination by the change in tuberculosis morbidity and mortality, was rejected as unsound. Similarly, it was unacceptable to vaccinate all who were willing to be vaccinated and use those who refused as controls.

Another important decision concerned the size of the studies. With the steady drop in the prevalence of tuberculosis, only in large studies would there be enough cases of tuberculosis to indicate whether there was less tuberculosis among the vaccinated than among the controls.

This aspect led to a third, the matter of evaluation. Few people today have the time, the staff, or the money to do regular, periodic examinations of large groups of apparently healthy individuals. Evaluation therefore would have to depend primarily on the established systems of finding and reporting tuberculosis cases and deaths.

Finally, in order to determine the impact of the BCG program on the total tuberculosis problem, it would be necessary to know about the tuberculosis which occurred, not only among the vaccinated and controls, but also among the tuberculin reactors who were ineligible to receive BCG.

Thus, it was determined that the main characteristics of the studies should be, first, that they would be control studies (some people would be vaccinated, some not); second, that they would be very large-scale studies; third, that followup would be made an integral part of the established system of notification of tuberculosis cases and deaths; fourth, that both those eligible for vaccination and those not eligible would be included in the followup.

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[1] Presented before the medical session, as part of the session on tuberculosis control, at the annual meeting of the National Tuberculosis Association, Los Angeles, Calif., on May 20, 1953.

[2] Anderson, R. J., and Palmer, C. E.: Journal of the American Medical Association, 1950, *143*, 1048.

[3] Anderson, R. J.: Public Health Reports, August 4, 1950.

Such studies, it was fully recognized, might be criticized because the evaluation depends so heavily on mortality and morbidity reporting. However, just such information is used to measure all our efforts in tuberculosis control. After all, if BCG vaccination in a population is not effective enough to be recognized through reasonably efficient reporting of tuberculosis cases and deaths, its widespread use can hardly be advocated.

The first study was started in 1947 in Muscogee County, Ga., a community with a population of approximately 100,000 persons. In the spring of 1947, the entire school population was tuberculin tested, and half of the nonreactors were vaccinated. Three years later, in 1950, the BCG program was made part of a mass survey of the whole population, who were invited to have chest roentgenograms, tuberculin tests, and BCG vaccination. Approximately 10,000 schoolchildren were included in the early program; about 60,000 of the general population were added in 1950. Muscogee County is a reasonably typical community with a tuberculosis mortality rate somewhat below that of the rest of the country. The program there is directed by a full-time Public Health Service physician who, in cooperation with the practicing physicians, is able to insure accurate diagnosis and efficient reporting of cases and deaths from tuberculosis.

The second Public Health Service program is among the American Indians, where the prevalence of tuberculosis is many times higher than in the rest of the country. The fieldwork of this cooperative undertaking was carried out in 1949 by the Bureau of Indian Affairs and included a high proportion of the Indian children attending Federal and mission schools in the continental United States. The number of children under study is 27,000.

The third program is in Puerto Rico, where the fieldwork of testing and vaccinating was begun in the fall of 1949 and completed in the spring of 1951. It is a cooperative undertaking with the insular government and was offered to all of the estimated 400,000 children attending school on the island. Although the field teams visited almost every school on the island, only about one-third of the expected number of children actually participated. Even so, it was expected that the high tuberculosis mortality rate in Puerto Rico might give, fairly soon, an indication of what BCG could do. The total number of children under study is 165,000, including 18,000 preschool children.

A fourth study was undertaken in a special group, 20,000 mental patients of all ages in State institutions in Ohio.

In table 1 is shown the subdivision of each study population into three groups: The tuberculin reactors, the vaccinated, and the controls.

In the first three studies, about half of the populations were tuberculin reactors and not eligible for vaccination, leaving the other half to be divided into the vaccinated and control groups. The division, however, was different in each study: in Georgia, one-half of the persons were vaccinated; in Puerto Rico, 2 of 3, and among the Indians, 3 of 4. Of the 20,000 Ohio mental patients, three-fourths were already reactors, leaving just over 5,000 eligible for vaccination. In this group, 6 of 7 were vaccinated.

The total number of persons included in the four studies is 282,000: 87,500 vaccinated, 50,500 controls, and 144,000 tuberculin reactors. The nonreactors were subdivided into vaccinated and control groups by strictly unbiased methods which insure that the two groups are entirely comparable. The stage has thus been set for several large-scale tests of what BCG could accomplish as a broad public health measure.

TABLE 1.—*Location and size of the BCG control studies of the Public Health Service*

Year program started	Location and type of study group	Persons	Vaccinated group	Control group	Tuberculin reactors
	Muscogee County, Ga.:				
1947	Schoolchildren	10,000	2,500	2,300	5,200
1950	General population	60,000	16,000	16,000	28,000
1949	American Indian schoolchildren	27,000	11,500	3,500	12,000
1950	Puerto Rican children	165,000	53,000	28,000	84,000
1948	Ohio mental patients	20,000	4,500	700	14,800
	Total	282,000	87,500	50,500	144,000

TABLE 2.—*Tuberculosis cases and deaths reported by December 1952, among persons in Public Health Service BCG control studies*

Study group	Relative size of subgroups V:C:R	Type of report	Vaccinated group	Control group	Reactors
Muscogee County, Ga., population	1:1:2	Deaths	0	0	3
		Cases	2	3	20
American Indian schoolchildren	3:1:3	Deaths	0	1	13
Puerto Rican children	2:1:3	do	1	4	24
		Cases [1]	(6)	(2)	(75)
Ohio mental patients	6:1:20	Deaths	4	1	36
		Cases	43	6	286

[1] Utilizing only a limited set of reports.

It has been no small task to carry the studies this far—to tuberculin test and vaccinate, to make accurate individual records, and to set up the necessary statistical files or rosters. Now, these studies are in the follow-up phase, matching current tuberculosis mortality and morbidity reports with the rosters and, insofar as possible, checking the accuracy of these reports.

The results of the followup thus far are summarized in table 2. In some respects they are both striking and informative. All four studies show that a very large part of the tuberculosis appearing in the study groups has occurred among those who were already infected, i. e., the tuberculin reactors who were not eligible for vaccination. In other respects, the results are inconclusive. Little tuberculosis has appeared in those eligible for vaccination, whether or not they had been vaccinated.

In Muscogee County there have been only 3 deaths from tuberculosis so far in the entire study population, all of them among the tuberculin reactors. The morbidity has also been remarkably low. Only 25 new cases of tuberculosis have occurred: 20 in the 3 years of followup of the older group, and 5 in the 6 years of followup of the original school group. The bulk of new cases has occurred among those not eligible for vaccination; very little tuberculosis has appeared among the nonreactors. The 5 cases among the vaccinees and controls have occurred in the large group who entered the study in 1950; there have been no cases of tuberculosis in 6 years among either the vaccinated or control schoolchildren.

Results from the Indian study are limited to information on deaths. There have been 13 tuberculosis deaths among the 12,000 tuberculin reactors. Only one tuberculosis death has been reported for the 3,500 controls. If this rate were applied to the vaccinated, 3 deaths would be expected, while actually there was none. No conclusions can be drawn from so few cases, but the results do not disagree with the view that vaccination is of value.

In Puerto Rico also there has been a considerable concentration of tuberculosis mortality in the tuberculin reactors, 24 deaths during the first few years of the program. In this study, however, there is a little stronger indication that BCG may be of value. There have been 4 deaths in the controls and only one in the vaccinated group, which contained twice as many children. If the mortality rate of the controls were applied to the vaccinated, 8 deaths would be expected, but only one occurred. The numbers, of course, are very small, but they do suggest that the vaccinated are faring better than the controls.

Tuberculosis morbidity reports in Puerto Rico are somewhat deficient in the completeness of the reporting and the accuracy of diagnosis, but there is no reason to suspect any bias related to the fact of BCG vaccination. For this progress report, only a very limited number of morbidity reports was available. They show 6 new cases of tuberculosis among the vaccinated, 2 among the controls, and 75 among tuberculin reactors. Here, again, most of the cases have occurred among the reactors. Unlike the mortality data, the morbidity material does not show signs that the vacinnated have been benefited by their vaccination.

Among Ohio mental patients there is essentially no difference between the vaccinated and controls with respect to tuberculosis mortality. One death occurred among the 700 controls, and 4 among the 4,500 who had been vaccinated. As in the other studies, the great majority of the deaths from tuberculosis have occurred among the tuberculin reactors.

New cases of tuberculosis in the Ohio study numbered 43 in the vaccinated and 6 in the controls. If the morbidity rate among the vacinnated had been the same as in the controls, 36 cases would be expected in the vaccinated; thus, the morbidity rate in the vaccinated is actually somewhat higher than in the controls. Again the bulk of the cases occurred among the tuberculin reactors, 286 of the total of 335 cases reported so far.

What conclusions can be drawn, now, from all of this work? First,—and all four studies agree on the point—a very large proportion of the tuberculosis which appeared in each population during the first few years after the vaccination program occurred in the group who were not vaccinated because they had already been infected. This implies that mass vaccination, even if BCG is effective, cannot be expected to have a large and immediate influence on tuberculosis mortality and morbidity rates.

The second major point more or less follows. So little tuberculosis has occurred among those eligible for vaccination, whether or not they were vaccinated, that the number of cases and deaths is still too small to provide any definite evidence on the effectiveness of BCG. It is possible that, in the Indian and Puerto Rican mortality data, there may be early signs that BCG, under certain circumstances, could be useful in tuberculosis control. On the other hand, it is also true that in none of the morbidity comparisons is there any evidence of a beneficial effect of BCG.

The third point is that these studies do not indicate that tuberculosis in this country would be more effectively controlled by adding mass vaccination programs. Muscogee County in Georgia may not be entirely representative of the whole country but, since the effect of the vaccination program there is imperceptible, it seems that there is little reason to expect very different results in other communities.

In the present report there has been time only to describe very briefly the Public Health Service studies. Neither these studies nor those in recent reports by others indicate a need for changing the Public Health Service recommendations of 3 years ago.

CARROLL E. PALMER.
LAWRENCE W. SHAW.

Division of Chronic Diseases and Tuberculosis, Public Health Service, United States Department of Health, Education, and Welfare, Washington, D. C., July 15, 1953.

LETTER FROM AMERICAN PUBLIC HEALTH ASSOCIATION

Senator HILL. In connection with the general health grants on which Dr. Hilleboe touched in his testimony, I have received a letter from the American Public Health Association, New York, with which they enclosed a statement concerning the aged and chronically ill, and the accident prevention programs, financed in the appropriation "Assistance to States, general." The association's letter, their statement, and certain resolutions passed by the association will be made a part of the record at this point.

(The information referred to follows:)

THE AMERICAN PUBLIC HEALTH ASSOCIATION, INC,
New York, N. Y., May 6, 1958.

Hon. LISTER HILL,
Chairman of the Senate Appropriations Subcommittee on Labor Health, Education, and Welfare, Washington, D. C.

DEAR SENATOR: The American Public Health Association was distressed to note in reviewing the budget provisions under "Assistance to States, general," of the Public Health Service, that substantial reductions were proposed in the programs for health of the aged and accident prevention. The House Appropriations Subcommittee reduced the request for work with the aged and chronically ill by $74,000 and the budget request for accident prevention activities this year has been decreased $76,000 or almost 25 percent below that appropriated last year.

We would appreciate your submitting the enclosed statement to your committee for their consideration. Thank you kindly.

Sincerely,

BERWYN F. MATTISON, M. D.,
Executive Secretary.

STATEMENT OF THE AMERICAN PUBLIC HEALTH ASSOCIATION

Mr. Chairman and members of the committee, I am Dr. Berwyn F. Mattison and, as executive secretary of the American Public Health Association, have been authorized to speak for this organization on behalf of the appropriations for accident prevention and chronic disease activities of the Public Health Service through its funds for "Assistance to States, general."

The American Public Health Association is a voluntary professional organization of over 13,000 physicians, dentists, nurses, engineers, nutritionists, and other public health personnel. One or more members of practically every full-time professional voluntary and official public health agency in the country are included in our membership. Together with the 20,000 members of our 43 affiliated State societies, each of which is formally represented on our association's governing council, we are the largest public health organization in the world.

The 152-member governing council of the American Public Health Association which is our basic legislative and deliberative body has gone on record in formal resolutions to recommend the expansion of Federal activities in the fields of accident prevention and poisoning control. Although the great majority of the members of our governing council are associated with State and local rather than Federal public health agencies, they have specifically urged further action by the Federal Government to stimulate State programs to improve the health of older persons.

Attached for your information are copies of five resolutions recently passed bearing directly on programs for accident prevention and chronic disease control.

In the face of the enormous toll of over 90,000 accidental deaths a year and of data carefully gathered in the door-to-door interviews of the national health survey indicating that about 50 million Americans suffered accidental injuries for which they sought medical care or were incapacitated for at least 1 day or more, the published budget of the accident prevention program exhibits a decrease of over $70,000, or almost 25 percent as compared to last year's appropriation. We have determined that such a cut would require abandonment of plans for several specific projects including 1 in the area of youthful traffic offenders, 1 in the personal and environmental circumstances underlying accidents that result in hospitalization, 1 on training professional personnel in State and local accident prevention techniques, and 1 on the accidental poisoning of children.

The House Appropriations Subcommittee cut the request for appropriations for work with the aged and chronically ill $74,000. At a time when chronic disease and health of the aged is one of the foremost problems in the country, such a cut is a blow to the overall program. It will require a reduction in funds for contracts affecting demonstration programs such as those in health maintenance of older people and in joint counseling and activity centers for the aged. Discontinuation of special programs for the older persons scatters many specially trained personnel carefully and painstakingly recruited. It also undermines State confidence in ongoing programs jointly financed by State and local funds, many of which have only recently been laboriously built up.

In summary, objective, impersonal statistics reveal scores of thousands of persons dying and millions disabled from accidents and chronic diseases. Subjectively, nearly every one of us has been personally touched by the tragedy of an accident or chronic illness among his immediate family or his circle of intimate friends. We urge the restoration of the $74,000 cut by the House Appropriations Committee from the program for the aged and chronically ill and we stress the need for more, rather than less, funds for accident prevention this year in the appropriation for "Assistance to States, general" of the Public Health Service.

FEDERAL ASSISTANCE TO PROGRAMS TO IMPROVE THE HEALTH OF OLDER PERSONS

Whereas the number of older persons in the United States is increasing at a rate greater than that of young and middle-aged adults; and

Whereas chronic disease and disability is already many times as great for those 65 years of age and older as for those under age 45; and

Whereas older persons are the least insured against the cost of medical and hospital care and generally have inadequate financial resources; and

Whereas there is evidence that the high incidence and the catastrophic impact of disabling chronic disease may be reduced by an adequate preventive medicine program, including case finding, early diagnosis, and treatment of chronic diseases among those in the younger age groups, as well as among older persons; and

Whereas official health agencies do not now have the funds and personnel to develop and promote programs required to deal effectively with the public-health problems which have been developing as a consequence of an aging population: Now, therefore, be it

Resolved, That the American Public Health Association recognizes that the health of older people is a public-health problem of national magnitude and concern, and thus warrants action by the Federal Government to stimulate the development of programs in the States designed to reduce the impact of chronic illness upon older people; and be it

Resolved, That the American Public Health Association recognizes the need for financial support by the Federal level of Government for State and local programs dealing with health problems of older people; and be it further

Resolved, That the American Public Health Association instruct its officers to represent these views to the Congress in support of appropriate legislation providing, in addition to public policy, adequate financial support to health programs for older persons.

Extension and Coordination of Accident Prevention Activities

Whereas accidents rank first in the United States as the cause of death in persons 1 to 35 years of age, and fourth as the cause of death among all age groups, and in 1955 caused 93,000 deaths, and disabled for a day or longer an estimated 9 million persons, of whom 320,000 were permanently disabled; and

Whereas accident prevention programs of all types have distinct health aspects and therefore should be actively supported by health agencies; and

Whereas the efforts to solve the many complex problems involved in preventing accidents are in need of coordination: Therefore be it

Resolved, That health agencies assume active roles in all types of accident prevention programs; and that it be further

Resolved, That consideration be given to the advisability of establishing within the Federal Government a national accident prevention center to coordinate the activities of various accident prevention agencies in order to improve the safety of the people of the United States through conducting research, investigations, experiments, and demonstrations relating to the cause of and means of preventing accidents.

Prevention of Injury and Death Due to Motor Vehicle Accidents

Whereas motor vehicle accidents have become a major hazard to public health, since approximately 1 million persons are injured annually in the United States, of which between 35,000 and 40,000 die as the result of motor vehicle accidents; and

Whereas the objective of the American Public Health Association is to protect and promote public and personal health; and

Whereas trends in current research indicate that a substantial proportion of deaths and injuries could be prevented by alterations and improvements in design of motor vehicles and related accessories and by utilization of proper restraining devices: Therefore be it

Resolved, That the American Public Health Association recommends the further development of motor vehicle accident prevention programs and encourages the extension of the efforts of the automotive engineers and manufacturing companies directed to the prevention of injury and death, and that a copy of this resolution be sent to the respective manufacturers and engineering associations.

Accident Prevention

Whereas accidents are now the leading cause of death in all age groups from 1 to 35; and

Whereas accidents kill more children than all disease combined; and

Whereas accidents are the greatest single cause of loss of productive years of life; and

Whereas accidents cost the Nation more than $10 billion a year; and

Whereas public health departments can, by the application of present knowledge, make a significant contribution to a decrease in the present annual toll of accidental deaths and injuries: Therefore be it

Resolved, That State and local health departments give high priority to the orientation and training of staff members in accident prevention principles and techniques and inaugurate State and local accident prevention programs as rapidly as available funds and personnel will permit.

ENDORSEMENT OF POISON CONTROL CENTERS AND HEALTH DEPARTMENT PARTICIPATION IN THEIR DEVELOPMENT

Whereas the great variety and wide use of natural and synthetic chemical and pharmaceutical products today in industry, farms, and homes constitute, through accident and misuse, an important problem of public health; and

Whereas poison control centers are being established in a number of cities of this country to provide physicians and hospitals with prompt information on diagnosis and treatment; and

Whereas it is essential for the proper study and control of poisoning that information cases be collected systematically and used to prevent other accidents or misuse: Therefore be it

Resolved, That the American Public Health Association encourage the development of poison control centers and urge health departments to actively participate in the development of their services to secure epidemiologic data concerning poisoning and to establish preventive measures for the health protection of the community.

LIBRARY SERVICES PROGRAM

STATEMENT OF JOHN SHERMAN COOPER, A UNITED STATES SENATOR FROM THE STATE OF KENTUCKY

FULL AUTHORIZATION REQUESTED

Senator COOPER. Mr. Chairman, I know your burdens, so I will be brief. As the committee knows, I asked last year at this time that the full $7.5 million authorized by the Library Services Act of June 19, 1956, be appropriated; $5 million was later appropriated by the Congress under grants for library services, and I believe this amount represented the only increase over the budget recommendations approved by Congress in this bill last year.

That action in itself indicates the widespread support enjoyed by the library services program, and the recognition already earned by this worthwhile work.

Again this year, I ask the committee to recommend the full appropriation of $7.5 million authorized—as the amount needed to enable the States to move forward with their plans to expand rural library services.

I ask this amount because there are few Federal-State aid programs where the return, in terms of human welfare per dollar spent, is as great as in this program which brings good books and a means of education to thousands of people. There is a great thirst for knowledge among those living in isolated rural areas. In fact, the demand for books in these areas is far greater than in the cities where so many mediums are available for entertainment and education.

HOUSE ALLOWANCE

The House of Representatives has allowed $5 million for this work. That is not, it is true, a reduction. On the other hand, I believe it would bring to a halt the very expansion of rural library services

contemplated under the act—expansion which is urgently needed and for which the States and local communities have worked so diligently.

My own State of Kentucky, through its library extension division, together with hundreds of dedicated citizens at the local, county, and State levels, and through the Kentucky Library Association and the Friends of Kentucky Libraries, has developed a comprehensive and forward-looking program for expanding library service throughout the State.

To meet the needs of its rural people, Kentucky pioneered in the development of a massive bookmobile program, through which the people in rural sections have libraries brought to them. I think it is fair to say that the Kentucky bookmobile program is the most outstanding in the Nation and, together with the regional library centers made possible by the Library Services Act, this coordinated program has aroused great interest and enthusiasm in the State.

The bookmobile program was established wholly by private subscription. It gives continuing testimony to the active interest of the people of Kentucky in providing adequate library service for the entire State. In 1957 our 96 bookmobiles made 4 million loans to the book-hungry people of rural Kentucky.

Yet the fact remains that, as welcome as the bookmobile program has been, rural library services in Kentucky remain woefully inadequate. The American Library Association estimates that $3.59 per capita is needed to supply minimum library service.

Kentucky has only 16 cents per capita for rural service. Our 96 bookmobiles had only 2,500 books each to loan last year. Kentucky has made a wonderful start, but it is just that, a start.

Unless the full program authorized by the 1956 Library Services Act is implemented, the State will not be able to help those new regions that are now asking for, and have worked hard for, the benefits which rural library service can bring to their people.

To take full advantage of the program, Kentucky has formulated a carefully worked out plan which calls for the development of four library regions each year. This 5-year program is designed to bring adequate library service to the 2 million people of my State—74 percent of the population—who did not have it. Four of the fifteen regional centers have already been established, and four more are scheduled for service development in 1958–59.

EFFECT OF HOUSE CUT

I am informed, however, that the $5 million appropriation recommended by the House would mean cancellation of the plans for these 4 new regions. The fact is that, already slowed by the appropriation of only $5 million last year, acceptance of the House figure would mean this expansion program would be brought to a standstill.

This situation is not peculiar to Kentucky. The 45 States and 5 Territories now participating in the grant program are making full use of the $5 million appropriated last year, and would have used to full advantage the entire $7.5 million authorized.

These States are willing and anxious to match the full amount, and have laid plans for development of their library services in the expecta-

tion that it would be made available each year. Up to this time, Congress has voted only $7,050,000 for this purpose, though the States expected, and laid plans for, the $15 million authorized.

Approval of the House figure would mean that by the end of the third fiscal year of the program some $12 million would have been used, in contrast to the $22.5 million program contemplated by Congress under the act. We will have fallen some $10.5 million behind schedule, with only 2 years of the program left to run. No wonder, then, that the States are concerned about the need for retrenchment in their own planning.

IMPORTANCE OF PROGRAM TO NATION

This program is truly of national importance. In an age of rapidly advancing technology it is of the highest importance that our population be well-read and well-informed. We are all concerned about the need for a higher standard of learning in our Nation.

Many proposals have been made to improve the quality of our education. It would be strange indeed, if, in the midst of this fervor for learning, we were to cripple a program which contributes so directly to the development of our Nation's intellectual resources.

I urge the committee to recommend the full amount of $7.5 million authorized under the Library Services Act, an amount which will enable this program of broad human appeal and national welfare to move forward toward its ultimate objective—the right of all people, wherever they live in this great Nation, to know and to learn—through books.

Senator HILL. Thank you, Senator.

COMMUNICATIONS

Senator COOPER. I would like to file 2 letters, 1 received from Hon. Robert R. Martin, superintendent of public instruction of the Commonwealth of Kentucky, and another from Miss Margaret Willis who has administered this service and has done outstanding work.

Senator HILL. We will be happy to have those in the record following your statement.

(The letters referred to follow:)

COMMONWEALTH OF KENTUCKY,
DEPARTMENT OF EDUCATION,
Frankfort, February 26, 1958.

Hon. JOHN SHERMAN COOPER,
United States Senate, Washington, D. C.

DEAR SENATOR COOPER: Kentucky's aspirations and accelerated efforts for greatly improved library services for our people seem to be facing serious appropriation obstacles in President Eisenhower's proposal of only a $3 million appropriation for the Library Services Act for 1958–59.

It is my understanding an appropriation of the above amount would reduce Kentucky's share to only $50,000. The present appropriation of $5 million gives our State program $137,000. A full appropriation of $7,500,000 would give Kentucky $221,000.

The impact of our efforts of the past few years to implement greatly improved library services is just now beginning to benefit our people. We now have 96 bookmobiles in operation which are closely geared to the development of regional library centers. We have 4 new regional libraries in operation and the establishment of 4 more is scheduled for 1958–59. Ultimately, plans call for about 15 regional libraries serving all sections of Kentucky. As you well know, this program

of expanded library services, coupled with improvements in public education, would give great impetus to our efforts to raise the educational level of our people.

It is my understanding an appropriation of only $3 million would result in the closing of at least 2 of our newly established regional libraries and abandonment of the plans for the establishment of 4 regional libraries scheduled for next year.

Since an appropriation of $5 million will make it possible for Kentucky's program to only stand still at its present level, I want to urge you to exert your efforts and influence for the full appropriation of $7,500,000 for the year 1958–59. I am sure your help in this matter will be sincerely appreciated by not only the professional persons involved in our library program, but also by the many good citizens who have given so freely of their time and material support to our library program.

Cordially yours,

ROBERT R. MARTIN,
Superintendent of Public Instruction.

LIBRARY EXTENSION DIVISION, BERRY HILL,
Frankfort, Ky., January 21, 1958.

Hon. JOHN SHERMAN COOPER,
Senate Office Building, Washington, D. C.

DEAR SENATOR COOPER: This letter concerns the subject of one telephone conversation of December 30, 1957, between you and Mr. Dean Cadle of the Library Extension Division staff about Kentucky's need for the full appropriation under the Library Services Act.

The original plan for regional development in Kentucky required the use of the full appropriation from the Federal Government, the full 1956–57 State appropriation for the administration of the Library Extension Division and a steadily increasing amount each year from the State aid fund ($50,000) and from the fund for books for bookmobiles ($45,000). The amount originally allocated for the development of the first 4 regions was over $137,929—an amount equal approximately to the total received from the Federal Government, which cut its appropriation from $7,500,000 to $5 million, thus reducing Kentucky's share from $220,850 to $137,929.

The sails of the regional library development had to be trimmed considerably, while the plans for the purchase of informational and reference books for bookmobiles, along with the development of a circuit of audiovisual materials had to be dropped. Regional staffs had to be cut from 4 persons to 3. The amount allocated originally to strengthening the Library Extension Division was found to be inadequate to do the big job ahead; $13,600 was anticipated from Federal funds to pay for a small amount of additional staff and approximately $8,000 was budgeted to pay for increased operating expenses. All this had to come out of the $137,929, the Federal funds for fiscal 1957–58.

It has become obvious that at least one additional field librarian has become necessary to work constantly in the field, while 2 junior clerks and 1 more clerk typist are desperately needed at home base to get out the work. At present, a tremendous amount of work has been done to prepare books for the regions, but the job has been done at the expense of the headquarters organization.

When the division announced its intention of gradually absorbing State aid funds ($50,000) into the regional development, the counties responded with an instantaneous cry of disappointment.

State officials began to take notice of the intense need of the counties for their small State aid checks; they recognized the need by recommending that we still continue to distribute cash grants to the counties for their library programs.

The result: The Division was forced to revise its State budget request for fiscal 1958–60 upward, to take care of the amounts lost to the projects planned when State aid and bookmobile books were still distributed countywise.

With the publication of Division plans for the use of Federal and State funds, many enterprising counties began to work feverishly to qualify for regional development. Four regions soon qualified, and one region followed closely behind. Several others lacked only one county to qualify. The region qualifying soon after the first four was the area around Caldwell County. They are ready to go. The region around Clark County is now practically ready to begin. Winchester citizens have worked like beavers to get an adequate library building. They now have it—an attractive building (formerly a church) near the center of

town. In Rowan County, Jack Ellis is straining every nerve, muscle, and dollar bill (borrowed and otherwise) to get fully trained to be a regional librarian in a region he hopes will begin in his hometown—Morehead. In Owensboro, Mrs. Evelyn Triplett, library board members and citizens are pushing for a region, and it looks as if they may qualify. In Hardin County, the seemingly impossible is being achieved. The fiscal court, nudged constantly by countless citizens, is looking more and more pleasantly in the direction of an appropriation necessary to qualify as a regional headquarters. Barren County citizens are pushing for that county as a regional center. Some have already been working for it for several months.

If the Federal Government does not appropriate the full $7,500,000 this year, the Extension Division may not be able to start any new library regions. The most that can possibly be done, if Federal funds are kept at $5 million, will be to develop 1 region. What is going to happen to the others? Their interest will subside and resentment will take its place.

The need for education and access to the tools of education is an emergency need now. Enlightenment can be obtained by adults in rural areas from onel source only—the regional public library system.

Perhaps our predicament can better be presented in the following manner. Kentucky's share of the Federal funds ($137,929), if the appropriation remains at $5 million, must be spent in the following manner during fiscal 1958–59:

1. Books for the 4 regions established during 1957–58 ($12,000 per region)	$48,000
2. Salaries for staff in the 4 regions established during 1957–58 ($9,000 per region)	36,000
3. An approximate amount for Library Extension Division staff performing regional work	20,000
4. For regional equipment, supplies, travel expenses, postage, etc	10,000
Total	114,000

When the obligated $114,000 is deducted from the $137,929, only $23,929 remains with which to establish new regional programs during fiscal 1958–59. Since all odds are against our adding any part of our State aid fund ($50,000) or our bookmobile fund ($39,000), we will do well to establish only 1 new region instead of the proposed 4.

We are beginning to make real headway in getting regional library systems accepted in rural areas. Local areas are straining every resource and the State is providing matching funds. Is the Federal Government going to throw away this carefully nurtured opportunity? It will if the full appropriation is not made for the Library Service Act. Any assistance you can give will be greatly appreciated and, of course, repaid in any manner of which we are capable.

Most sincerely,

MARGARET WILLIS.

PREPARED STATEMENT

Senator HILL. Is there anything else you would like to add?

Senator COOPER. Not now. I would like to file a written statement particularly on the research program.

Senator HILL. Fine. We will be happy to have you file that. We thank you for your appearance, sir.

Senator COOPER. Thank you, Mr. Chairman.

(The statement referred to follows:)

STATEMENT OF SENATOR JOHN SHERMAN COOPER ON GRANTS FOR LIBRARY SERVICES

Mr. Chairman, as the committee knows, I asked last year at this time that the full $7.5 million authorized by the Library Services Act of June 19, 1956, be appropriated; $5 million was later appropriated by the Congress under grants for library services, and I believe this amount represented the only increase over the budget recommendations approved by Congress in this bill last year. That action in itself indicates the widespread support enjoyed by the library services program, and the recognition already earned by this worthwhile work.

Again this year, I ask the committee to recommend the full appropriation of $7.5 million authorized—as the amount needed to enable the States to move forward with their plans to expand rural library services. I ask this amount because there are few Federal-State aid programs where the return, in terms of human welfare per dollar spent, is as great as in this program which brings good books and a means of education to thousands of people. There is a great thirst for knowledge among those living in isolated rural areas. In fact, the demand for books in these areas is far greater than in the cities where so many mediums are available for entertainment and education.

The House of Representatives has allowed $5 million for this work. That is not, it is true, a reduction. On the other hand, I believe it would bring to a halt the very expansion of rural library services contemplated under the act—expansion which is urgently needed and for which the States and local communities have worked so diligently.

My own State of Kentucky, through its library extension division, together with hundreds of dedicated citizens at the local, county, and State levels, and through the Kentucky Library Association and the Friends of Kentucky Libraries, has developed a comprehensive and forward-looking program for expanding library service throughout the State.

To meet the needs of its rural people, Kentucky pioneered in the development of a massive bookmobile program, through which the people in rural sections have libraries brought to them. I think it is fair to say that the Kentucky bookmobile program is the most outstanding in the Nation and, together with the regional library centers made possible by the Library Services Act, this coordinated program has aroused great interest and enthusiasm in the State.

The bookmobile program was established wholly by private subscription. It gives continuing testimony to the active interest of the people of Kentucky in providing adequate library service for the entire State. In 1957 our 96 bookmobiles made 4 million loans to the book-hungry people of rural Kentucky.

Yet the fact remains that, as welcome as the bookmobile program has been, rural library services in Kentucky remain woefully inadequate. The American Library Association estimates that $3.59 per capita is needed to supply minimum library service. Kentucky has only 16 cents per capita for rural service. Our 96 bookmobiles had only 2,500 books each to loan last year.

Kentucky has made a wonderful start, but it is just that, a start. Unless the full program authorized by the 1956 Library Services Act is implemented, the State will not be able to help those new regions that are now asking for, and have worked hard for, the benefits which rural library service can bring to their people.

To take full advantage of the program, Kentucky has formulated a carefully worked out plan which calls for the development of four library regions each year. This 5-year program is designed to bring adequate library service to the 2 million people of my State (74 percent of the population) who did not have it; 4 of the 15 regional centers have already been established, and 4 more are scheduled for service development in 1958–59.

I am informed, however, that the $5 million appropriation recommended by the House would mean cancellation of the plans for these 4 new regions. The fact is that, already slowed by the appropriation of only $5 million last year, acceptance of the House figure would mean this expansion program would be brought to a standstill.

This situation is not peculiar to Kentucky. The 45 States and 5 Territories now participating in the grant program are making full use of the $5 million appropriated last year, and would have used to full advantage the entire $7.5 million authorized.

These States are willing and anxious to match the full amount, and have laid plans for development of their library services in the expectation that it would be made available each year. Up to this time, Congress has voted only $7,050,000 for this purpose, though the States expected, and laid plans for, the $15 million authorized. Approval of the House figure would mean that by the end of the third fiscal year of the program some $12 million would have been used, in contrast to the $22.5 million program contemplated by Congress under the act. We will have fallen some $10.5 million behind schedule, with only 2 years of the program left to run. No wonder, then, that the States are concerned about the need for retrenchment in their own planning.

This program is truly of national importance. In an age of rapidly advancing technology it is of the highest importance that our population be well-read and well-informed. We are all concerned about the need for a higher standard of

learning in our Nation. Many proposals have been made to improve the quality of our education. It would be strange indeed if, in the midst of this fervor for learning, we were to cripple a program which contributes so directly to the development of our Nation's intellectual resources.

I urge the committee to recommend the full amount of $7.5 million authorized under the Library Services Act, an amount which will enable this program of broad human appeal and national welfare to move forward toward its ultimate objective—the right of all people, wherever they live in this great Nation, to know and to learn—through books.

Senator HILL. Now Dr. Dack, Dr. Alexander, and Mr. Crockett.

MASSACHUSETTS GENERAL HOSPITAL

STATEMENT OF DAVID C. CROCKETT, ASSOCIATE DIRECTOR FOR RESOURCES AND DEVELOPMENT, THE MASSACHUSETTS GENERAL HOSPITAL, BOSTON, MEMBER OF THE NATIONAL ADVISORY ALLERGY AND INFECTIOUS DISEASES COUNCIL

PREPARED STATEMENT

Mr. CROCKETT. I am associate director of the Massachusetts General Hospital in Boston and the vice chairman of the research committee of the hospital and member of the council of the Institute on Allergy and Infectious Diseases Council. I have been on the Health Council before this.

I have a prepared statement, Mr. Chairman, which I shall be pleased to summarize.

Senator HILL. We will have it put in the record in full and we will be glad to have you summarize it any way you see fit.

(The statement referred to follows:)

At the end of the 1930's with the advent of sulfa drugs, dramatic advances were made in the treatment of infectious diseases. The antibiotics that appeared in the war period of the 1940's seemed to satisfy many scientists that the great scourge of infectious diseases was over. More recently the success of a vaccine for polio and the techniques now used in the development of this vaccine have satisfied many that a new attack on the viruses by a different method might see the end of another group of diseases, such as measles and infectious hepatitis to mention but two, but this may still be a long way off. At the same time there is evidence that viruses may hold the clue to the cure of cancer, heart disease, and arthritis.

Is the job nearly done or are we only just beginning? It is abundantly clear from many kinds of biological observations, that complacency is wholly unwarranted with respect to the eradication of infectious diseases. The influenza epidemic of this past winter, the emergency of insect carriers unaffected by once potent insecticides, the discovery by tissue culture techniques of families of viruses, as yet uncounted and unclassified—such considerations reveal the inadequacy of our knowledge for the prevention and control of communicable diseases. In the last 12 to 18 months, one other thing happened to further shatter the confidence of many who thought we were nearing the end of the problem of infectious diseases—the sudden almost epidemic-like appearance of antibiotic resistant staphylococci infections in hospitals. I have heard it said by a member of the American Hospital Association Committee on Infections in Hospitals that there is a serious shortage of trained people today to investigate this problem and work out methods of control.

Despite the existence of ample evidence pointing to the need for concern rather than complacency, there is a widespread tendency in medical schools to reduce the amount of time in their curriculums devoted to the study of communicable diseases. This has the indirect effect of reducing the number of physicians who eventually elect to make a career in the study of communicable diseases. It also

means that the knowledge of the general practitioners in the years to come will be even more fragmentary with respect to the prevention of communicable diseases that it is at the present time.

Dr. Justin M. Andrews, Director, National Institute of Allergy and Infectious Diseases, in his testimony before the Subcommittee on Appropriations in the House of Representatives pointed with justifiable pride to the way the influenza epidemic of this past winter was controlled. But will we be as successful 40 years from now in handling another epidemic? Will there be men trained and alert to the new factors then as there were this year? All of these problems and many others related to them are constantly brought to the attention of the Surgeon General's advisory councils of the National Institutes of Health.

The National Advisory Health Council in 1955 passed a resolution recommending that the Surgeon General study ways and means of initiating a training program within the National Microbiological Institute. This action was based on a recommendation of the Study Section on Parasitology and Tropical Medicine. The chairman of this study section recommended that $690,000 be provided annually for undergradute training grants for this area alone. At about the same time, the Microbiology and Immunology Study Section recommended that $20,000 be provided for individual training grants in mycology in the hopes that funds might be allocated to 12 schools, each to train 4 mycologists a year.

At the first meeting of the National Advisory Allergy and Infectious Diseases Council held on March 7 and 8, 1956, concern was expressed with the lack of qualified individuals going into graduate work, especially in the fields with which this council is involved. To assist in stimulating interest in the biological sciences, the members urged that efforts be made to obtain $500,000 in the 1957 appropriation for initiation of training grants under the National Institute of Allergy and Infectious Diseases.

At the next meeting of the same Council held on June 19 and 20, 1956, the Council held a lengthy and spirited discussion relating to the paucity of funds in the fellowship program and to the complete lack of funds for training grants. As a consequence, the following committee of the Council was appointed to look into this and make recommendations at the November meetings of the Council: Dr. Harry L. Alexander, professor of clinical medicine, emeritus, Washington University, St. Louis; Dr. H. O. Halverson, head of the department of biology, University of Illinois; Mr. Byron K. Larabee, president of Firestone Plantations; and myself as chairman. The committee met twice formally that summer, once in Akron, Ohio, once in Washington (Dr. Rene Dubos, a member of the Advisory Council joined us at the Washington meeting), and individually and collectively discussed this problem with a number of well-qualified experts in the field as well as with members of the Public Health Service and the National Institutes of Health. The committee also received reports submitted by Dr. Frye and Dr. Meleney of the China Medical Board, and from Dr. John I. Snyder, dean of the Harvard School of Public Health, and studied all the recommendations and resolutions from the study sections and advisory councils that had been passed prior to this period.

In September of this same year, the Microbiology and Immunology Study Section repeated an urgent recommendation to the Division of Research Grants and the National Advisory Allergy and Infectious Diseases Council on the desirability and necessity of increased fellowships in the field of microbiology. The following report from the committee of this Council was submitted to the entire Council in November 1956.

"The committee heartily endorses the resolution of the National Advisory Health Council passed formally at its meeting of February 25 and 26, 1955, concerning the necessity and advisability of establishing immediately a training grants program in the field of allergic and infectious diseases.

"The needs are multiple and acute, however, the committee is convinced that a very special need exists for training programs in allergy and immunology, parasitology and tropical medicine, mycology, virology, and rickettsiology.

"The committee strongly recommends that funds be requested for the establishment of training centers in these fields. The minimum sums needed to initiate this program are judged by the committee to be as follows:

Allergy and immunology	$400,000
Parasitology and tropical medicine	300,000
Mycology	240,000
Virology and rickettsiology	520,000
Total	1,460,000

"The shortage of scientific manpower is a national problem. It is particularly pressing in the medical research field because of the length of time needed to train this type of scientist. These training programs are vitally needed now to provide highly skilled scientific personnel in the areas which this committee feels are of the highest priority concern of the National Advisory Allergy and Infectious Diseases Council."

This report was unanimously accepted by the Council and it was recommended that it be forwarded to the Surgeon General.

Despite the strong feeling on the part of the Advisory Council that $500,000 was needed for research fellowships and $1,460,000 required as a minimum for training grants, only $117,000 was made available in fiscal 1958 for fellowships and $650,000 for training grants. After further administrative changes the actual sum available for fiscal 1958 was $101,000 for fellowships and $580,000 for training grants. These same figures appeared in the President's budget for 1959.

At the June 1957 Council meeting, 16 training grant applications for $433,279 were approved in the areas of allergy and immunology, parasitology and tropical medicine, mycology, and rickettsiology. Of these, 15 for $385,705 were paid and 1 for $47,574 was committed for payment from 1959 funds. In addition 3 for $81,881 were approved in the area of general microbiology. Since no funds were authorized for this category, these three were not paid, although the Council did request that the proposals be retained in the hope that funds would become available for the area in 1959.

In October the Council approved 14 applications for $336,152 in the authorized areas, and 1 for $37,260 in general microbiology. Since by this time the free balance was only $182,295, the Council recommended that the Institute personnel contact various applicants regarding budget reductions which would allow activation of all approved projects (except general microbiology). As a result of these negotiations 12 applications were paid in amounts reduced by 25 percent for the first year and 60 percent for subsequent years; 2 (reduced by 60 percent for all years) were committed for payment from 1959 funds. Therefore, the total backlog for the training program after the October Council, including those proposals in the area of general microbiology, amounts to about $238,000. It is anticipated that this will increase by $125,000 as time goes on since pending applications for the March meeting now total 9 for $217,269.

Commitments made against 1959 funds now total $571,964; 1960, $563,572; 1961, $565,618; 1962, $518,067. If the appropriation does not exceed the $580,000 proposed for 1959, the training grant program of this Institute will come to a standstill.

Once again the National Advisory Allergy and Infectious Diseases Council passed a resolution at the October 22 and 23, 1957 meeting which only slightly modified the recommendations of the previous years, that:

The training grant appropriation be increased to	$1,460,000
Allergy and immunology	400,000
Mycology	240,000
Parasitology and tropical medicine	300,000
Virology, rickettsiology, and microbiology	520,000

In summary, the only justification for this long exposition is that it points out the number of hours and the amount of study and thought that have gone into the preparation of the various reports sent to the Surgeon General's advisory councils. It also points up the futility of our efforts, as members of the Council, to get the necessary funds to implement a vital part of the program of the Institute. How long can we expect people of the caliber of the membership of the Council to come to Washington and give their time and spend endless hours reviewing grants and then to discover there is no money to pay them? On the study section level, how can we expect some of the best scientific brains of the country to give generously of their time to weed out and classify applications in order to give them priority and then to discover there is no money to pay them?

Last, but not least, the effect of constant discouragement on the investigators themselves will probably result in turning some of the best scientific talent in the country into other, more rewarding fields and create an even greater vacuum in the area of research in infectious diseases. From my own experience with the scientists in a large research hospital, I can only deplore the fact that we have not been able to state the case clearly enough and demonstrate our need graphically enough to assure adequate funds for this Institute.

I hope that the Subcommittee on Appropriations of the Senate appreciates the sincerity of these remarks and will respond to the needs of this Institute.

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FINANCIAL PROBLEMS OF INSTITUTE

Mr. CROCKETT. Thank you. My statement essentially is a historical description of the problems that the Institute has had, financial problems. I am a research administrator in a large research hospital.

Senator HILL. One of the largest in the country.

Mr. CROCKETT. That is right. I have had certain experience in the financial problems of financing research. I have been very much upset as a member of the Council and distressed by the need for money which was not available in various categories for this Institute.

For instance, in the second meeting of the Council for the new Institute in 1956 we set up a committee to study the possibility of getting money in the budget the following year for graduate training. We recommended, on the basis of careful studies, that $1,460,000 be put into the fiscal 1958 budget and when the chips were down, and after all the good deliberations and so forth, and through the help of this committee and so forth, and so on, we were pleased to get $650,000 but we were very disappointed we did not get the figure we really need.

Now, with all the testimony that you have heard today which really has been exceedingly interesting for us because it has supported every point we want to make, practically everyone has talked about the need for training personnel. Practically everyone has talked about the need for research.

ALLERGY AND INFECTIOUS DISEASES

Whether this was Dr. Parrott or the two gentlemen from the United Hospital Association who stole my thunder because I was going to wave the same magazine at you that they did—they all support in their testimony the points we want to make. That is that the Allergy and Infectious Diseases Institute has a great responsibility for basic research which it has not been able to meet and which it cannot meet with the funds presently recommended in the budget for this year.

As evidence of the important research in this field, I ran across a statement last night from Dr. J. R. Porter, editor of the Journal of Bacteriology, who said in the field of allergy and infectious diseases one-fourth of the Nobel prizes in medicine have been awarded to people working in this area and 2 or 3 of the awards in chemistry have been made to men using micro-organisms in their studies.

The field that is covered by this Institute is basic to all the medical problems that you are hearing about in this committee. For instance, the testimony that I read in the House hearings by Dr. Farber, from the men in the Cancer Institute talking about the importance of virus and heart disease and the Heart Institute and arthritis and metabolic diseases, is all about the need for trained personnel for studies in virology.

This is the Institute that is equipped to do this. In order to get on with this in any fashion, in any reasonable fashion, this next year we simply must have added extramural research grants.

Senator HILL. How much?

FUNDS REQUIRED ON BASIS OF APPLICATIONS

Mr. CROCKETT. The President's budget calls for $10,894,000. We need $16 million as a minimum figure on the basis of the applications

we have now before us. Some have not been screened by the study sections yet. Some have been approved and are ready for payment, but, as I said, some have not been screened. The only reason to my mind you have heard so many witnesses today all talking the same subject and all talking around our Institute is that we have not got any large cycle public group interested in this Institute like the Heart Institute and Cancer Institute, but if you did, there would be a loud cry that would outmatch anything that you have heard in these committees.

Now in the training-grant program a year ago we saw the need for $1,460,000. We need somewhere now between $1.5 million and $2 million for this program.

In research fellowships where the President's budget only allows us $101,000, that is a deplorably small figure. We ought to have something between a million and a million and a half dollars. These figures are not arrived at casually.

You have heard the witnesses from the Public Health Service in Bethesda. I am sure they have given you comparable figures. Members of the Council have seen the need. People come down to study section meetings, review endless numbers of grants which they know cannot be paid by the Institute.

This is a very discouraging and demoralizing thing that the whole research organization, this committee and Congress has been anxious to build up.

We hope that something can be done to correct the association this year. We are three, as you see us here, all ready to do a pas de deux.

Dr. Alexander, who is emeritus clinical professor of medicine, Washington University Medical School, and Dr. Dack who has been before you, who will talk to you from the point of view of infectious diseases, are here as witnesses also.

Talking this much as a layman, I feel embarrased. I have had some experience in the administrative needs. Before I close, I would like to say a word on behalf of an administrative problem at Bethesda. which is a little bit off the trolley

Senator HILL. I am glad to have any information you can give us. Those are wonderful men out in Bethesda, but they suffer from an inibition. When the budget sends a recommendation up here they are under an inhibition not to ask for anything beyond the budget estimates.

Of course if we ask them questions they give us the honest answers. We don't always have the background information or knowledge to ask the question that perhaps should be asked. You gentlemen have no inhibitions. I have very much interest in your statement, Dr. Crockett.

Mr. CROCKETT. I am Mister, sir. I am the only layman that you have heard.

Senator HILL. You see, I feel quite a comradeship with you because I am a layman myself.

BUILDING NEEDED FOR GRANTS PROGRAM

Mr. CROCKETT. The other point I did want to make is that I have been in and out, back and forth to Bethesda and watched with interest the growth of the clinical center there. I came down to Wash-

ington when President Truman laid the cornerstone for the building. But the mechanics of running the extramural program and research program within the institute is gradually hampered by the present office building they are using.

They need a new building desperately. All their clerks and people who are tabulating and keeping track of the extramural research program are located in a tumbledown, temporary building.

I could not help but pick up the material in the hearings before the House committee which pointed to the need. I just want to repeat that.

Senator HILL. I am glad to have you do that because, you see, there is a very desperate need and we cannot expect them to have efficient, economical operation out there and the best operation unless they have good facilities.

Mr. CROCKETT. Exactly. Here is my prepared statement which I have more or less summarized.

Senator HILL. That will be in full in the record. Thank you, sir.

Senator HILL. Now Dr. Alexander.

NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

STATEMENT OF HARRY L. ALEXANDER, EMERITUS PROFESSOR OF CLINICAL MEDICINE, WASHINGTON UNIVERSITY MEDICAL SCHOOL; MEMBER OF THE ADVISORY COUNCIL, NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

PROBLEM OF ALLERGY

Dr. ALEXANDER. I too have a prepared statement if I may comment on it.

As a member of the Advisory Committee of the National Institute of Allergy and Infectious Diseases, I am greatly concerned about the urgent need for these funds for the various activities. We all are.

My particular interest is allergy. For several years I was editor of the Journal of Allergy and have been concerned with the subject in the past for a long time. Since allergy is one of the important areas which is being supported by this institute, I should like to attempt to justify this support by talking about allergy, particularly in its relation to public health.

To begin with, I would like to place allergy in its proper prespective because there is a popular idea that allergies are a trivial disease, a lot of people have it, it does not amount to much.

As a matter of fact, that statement is largely correct. Allergies are one of the most common diseases of man. Most people have allergies, symptoms which are more or less trivial, and mild symptom of hay fever, poison ivy. But this impression overlooks a large number of cases in which allergy has serious implication.

BRONCHIAL ASTHMA

I would like to emphasize these: First I would like to talk about bronchial asthma. Bronchial asthma is a serious disease for two reasons. In the first place it is a crippling disease. The magnitude of this problem was expressed by a statistic of the Office of Vital

Statistics, that hay fever, which is complicated by asthma, in some 40 percent of the cases together with asthma ranks ninth in the most frequently disabling disease affecting some 4 million people.

Now asthma is a serious disease also because curiously the death rate is going up in spite of the fact that treatment of asthma is improving.

I think this point can be emphasized by the fact that before the year 1930 there were less than 30 proven deaths from bronchial asthma in the world's literature. Death from asthma is no longer very uncommon. This is a matter of over the last 30 years. Apparently the reason for this is that more and more middle age and older people are getting asthma.

When asthma attacks this age group, it is quite different than a typical allergic asthma of younger people. In the first place, no one knows the cause of this asthma. They cannot find the substance to which they are sensitive. Secondly, it is a more severe disease, so much so that all the deaths occurred in this group.

As a matter of fact, of those who died 40 percent had had the disease less than 2 years and a number of cases for less than 1 year and this is the situation in terms of malignancy that is matched by very few chronic diseases.

Now why asthma has taken this turn for the worse, as it were, is not known. We must await the results of research before we know that but the trend is still going up.

ALLERGIC REACTION TO DRUGS

I would also like to mention another situation in which allergy becomes steadily and rapidly worse. This concerns allergic reactions to drugs. Not all drugs are so chemically constituted that they can give an allergic reaction, and individuals vary greatly in their susceptibility to becoming allergic to them. But it is believed that everyone, if he is exposed sufficiently to one of these drugs that give allergy, will develop symptoms from it.

So the introduction of sulfa drugs, penicillin, the newer drugs for epilepsy, now the tranquillizing drugs and many others, both the tendency and frequency of allergic reactions have developed very rapidly, especially over the last few years.

It is true that most allergic reactions to drugs are not serious. They are temporary. But serious lesions are increasing rapidly. Such things as destruction of the blood, blood vessels, the liver, and there is no more a harming circumstance than to give an individual, a child, who is not very ill except having a mild infection, an injection of penicillin, have him immediately collapse, and 10 percent of those who do collapse die within a matter of minutes.

So we have this paradoxical situation where there are important drugs to help people to save their lives which, in increasing numbers, is having the reverse effect.

Unfortunately there is nothing in sight to stop the progress of this situation because these drugs are very important drugs. It is hoped that research in this field will reveal the reason why people have reaction to drugs and through research be able to help it and I am pleased to report that this Institute is supporting a good deal of research in this direction.

BROADER SIGNIFICANCE OF ALLERGY

Now, allergy has application of a much wider field than asthma, hay fever, the group with which it is conventionally identified. It plays an important role in infectious diseases as has been mentioned this morning and in infectious diseases the tendency of symptoms is in direct ratio to the degree of allergy which a patient acquires through the invading bacteria in the organs. Allergies responsible for serum thickness, which is a disease characterized by fever and arthritis and skin eruptions—they may last a week and sometimes are fatal—following injection of diphtheria antitoxin. I shall not take time to recite other situations in which allergy enters definitely, many in which the causes are unknown, but in which allergies are suspected.

Now with this expanding number of applications on allergy, allergy research will grow. And research is given impetus with the establishment of the National Institute of Allergy and Infectious Diseases with funds for its support.

I might say that good progress has been made, particularly toward difficult, complex, underlying mechanisms that cause an allergic disease, which are still unknown but we are getting close.

NO FUNDS FOR ALLERGY RESEARCH

Unfortunately this year this progress was unfortunately stopped because there were no funds for doing research and applications have piled up. I will testify, in my opinion, having examined them, that there are many of great importance and there are several most eminent investors who are applicants. So these are being held on file in the certainly great hope that funds will be available to activate some if not all of them.

I would like to say one final word about the changing pattern of education in allergy. When allergies were identified some 40 years ago as a cause of symptoms their importance was not appreciated. The teaching in the medical schools of allergy was perfunctory and unfortunately still is.

Gradually as they realized that allergy was a serious disorder some schools were able to establish full time sections of allergy comparable to those of cardiology and hemology. This was approved by medical educators as sound policy but unfortunately most schools were not able to set up these sections for various reasons.

NEED FOR QUALIFIED TEACHERS

I know that one of them was the lack of qualified individuals to teach. So when the Congress this year appropriated money for the training programs for this very purpose, immediately the response was on the part of many schools to apply for this money because it would be the basis of orientation by which they could improve teaching in allergy.

In my opinion, this is one of the most constructive and will be one of the most rewarding programs in the whole history of allergy because already some of the leading schools have integrated their undergraduate program with the graduate program and so the students and house officers in these schools are being exposed to a far better brand

of instruction and practice than ever before and they will therefore be better doctors.

Now, a word on the full request of $1,460,000 that I recall was asked for the year before last. If this amount were granted, the effectiveness of the program would be doubled, and even then it would not save all the applications that are on file.

May I say, speaking of allergy, I take this as an example, the council is by no means considered apart but merely as a sharer in part of an integrated program.

Senator HILL. That is a most interesting statement. Thank you, sir.

(The prepared statement submitted by Dr. Alexander follows:)

STATEMENT OF DR. HARRY L. ALEXANDER

ALLERGY AND IMMUNOLOGY

This statement reflects the need for increased appropriations for allergy, and for immunology which concerns the mechanisms by which allergic reactions are brought about. These special interests are but a part of a comprehensive program of this Institute. They are discussed separately as are other particular categories, merely as a matter of convenience.

The importance of support for intensified research in allergy relates to the basic fact that the complex processes within the body that cause allergic reactions are poorly understood. Although there are several measures that will alleviate symptoms temporarily, experience has indicated that a more constructive approach must await a sounder understanding of hidden mechanisms.

With most of the estimated 20 million individuals with allergy in this country, symptoms are uncomfortable, but of no particular consequence. Allergic headaches and digestive disorders, and the skin eruption from poison ivy are but temporarily disabling. There are, however, several situations in which allergic reactions have a more serious import. By far the most important of these is bronchial asthma, for, unless it is checked, the lungs gradually are destroyed, the heart then becomes affected, bronchial infection supervenes, and crippling is almost inevitible. Hay fever, especially in children, frequently leads to asthma. The magnitude of this problem is indicated in the tables of the Office of Vital Statistics of the United States Public Health Service. Of the first 30 main illnesses and handicapping conditions, hay fever and asthma rank ninth with some 4 million individuals involved. Moreover, according to the same source, the death rate from asthma has increased in recent years. The reason for this is under investigation.

Another expression of allergy which is beginning to assume serious proportion concerns reactions to drugs. Since the appearance of such substances as the sulfa drugs, penicillin, and now the tranquilizing drugs, large segments of the population have been exposed repeatedly to them. The amount of a drug administered and the frequency with which it is given are important factors in the production of reactions. Penicillin, for example, during the first few years after its introduction caused only mild symptoms, whereas now these are of increased frequency and intensity as hundreds of tons of it are administered annually. Again, most reactions from drugs are inconsequential, skin eruptions, mild fever and aching joints. However, the number of cases of destruction of the blood elements and of the liver, and inflammation of the arteries let alone sudden collapse and death are increasing, and scarcely a week passes without a published account of some new experience with drug reactions or confirmation of former ones. The situation is bound to get worse until the mechanisms that cause these reactions are understood and countermeasures established.

There are other disabling allergic disorders, particularly those identified with occupations. Examples of these are the severe respiratory symptoms in farmers sensitive to cattle hair and barn dust, and in bakers exposed to volatile flour; intense skin eruptions in workers in certain chemical factories and in surgeons whose hands become sensitive to rubber gloves.

For several years, allergy had not received all the serious attention that it deserved. One reason seems to have been the mild symptoms in many cases in comparison to the more serious disorders such as cancer and heart afflictions.

Some 10 or more years ago a group of diseases, usually fatal, called collagen diseases, came into prominence and there were indications that the mechanisms responsible for symptoms were referable to immunology and were possibly of allergic origin. By this time, there was increasing recognition of the role of allergy in many infectious diseases. This broader concept of allergy created a more serious interest in the subject, especially in academic thinking.

This attitude was given great impetus with the establishment of the National Institute of Allergy and Infectious Diseases with its funds available for research. In December 1956, soon after the extramural program was in operation, 130 applications for investigations of problems in allergy and immunology which required $1,700,000 were approved. This number increased as interest widened until support was abruptly terminated this year because of lack of funds. When this fact became known, applications fell off materially. Despite discouragement new applications which require some $400,000 were either dropped or are held over pending appropriations for them in the 1959 budget.

I have reviewed these applications and there are several by outstanding investigators who present studies of much importance. Lack of support interrupts continuity of progress. That good progress is being made may be demonstrated by two developments. The first is related to clinical allergy. The greatest advance in the treatment of this disorder was the discovery that the hormone cortisone or its related products will promptly relieve essentially all forms of allergy and doubtless many lives have been saved. However, the administration of this hormone caused several dangerous side effects. Through research, the continual refinement of this substance as well as a clearer understanding of its actions and the methods of giving it are making its administration safer and its usefulness has been greatly enhanced.

Another example of progress is the development of an immunological discovery. This is related to that fact that allergy affects cells of certain tissues. One may transfer such cells to a normal animal and thus make it allergic. Now, the white blood corpuscles of an allergic man may be transferred into the skin of a normal individual and here allergy can be demonstrated in the form of a positive skin test. These white blood cells thus contain the key to the solution of the problem of how a mechanism that causes allergy operates. The phenomenon is exciting wide interest, and a breakthrough of this vital problem seems near.

What promises to be, perhaps, the most rewarding project in the history of allergy was the establishment of training centers. It was proposed to establish these in specialties which needed to attract more qualified graduates. This program was made possible through appropriations this year made by the Congress. Medical schools for the most part were selected as appropriate centers. The project coincided with increasing interest in allergy and immunology on the part of many schools, some of which had established sections in these disciplines on a par with those of cardiology and hematology.

The announcement of this program was received with lively interest and many applications were received. These were screened by a selected committee and already 12 schools are participating. These include such institutions as Johns Hopkins, Cornell, Harvard, and the University of Chicago.

It should be pointed out that the establishment of training programs in medical schools carries benefits beyond instruction of trainees. Although funds are limited to this purpose, training cannot be isolated from other academic interests. The use of ward beds, outpatient and other facilities for this program has given allergy an important place in teaching curriculums. House staff and students are exposed to a much better brand of instruction and clinical practice of this specialty than ever before.

Last year $400,000 was requested for the training program in allergy and immunology. This was part of an overall program which included, also, phases of microbiology and tropical medicine; with a total cost of $1,460,000. An appropriation of $650,000 was made of which $240,000 was allotted to allergy and immunology. If the present request for a restoration of the $1,460,000 were granted, it would be completely used up advantageously by continuation of present grants as well as by approved new applications for which there are no current funds. Such an appropriation would double the effectiveness of the present program.

Graduates already trained in various disciplines with which this Institute is concerned, who are qualified to pursue further research activities have been awarded fellowships. The number of applicants for this important development far exceeds those who are accepted. The appropriation of $101,000 for all fellowships of which the interests of allergy and immunology are but a part, is far short

of that needed. A sum of $500,000, therefore, is urgently requested for fellowship training, for many of those who participate in it will pursue research careers.

Senator HILL. Dr. Dack.

THE UNIVERSITY OF CHICAGO

STATEMENT OF DR. G. M. DACK, PROFESSOR OF MICROBIOLOGY

INFECTIOUS DISEASE RESEARCH

Dr. DACK. As a member of the board of governors of the American Academy of Microbiology and having served for 5 years as chairman of one of the study sections, and also as a member of the Surgeon General's Advisory Council on Allergy and Infectious Diseases, I am familiar with the program which is being carried out there. My term of office ended about 6 months ago.

It seems to me that our problems are there, first of all, and I do not think that most of us realize that infectious diseases are the problems that they once were. When I started teaching medical students in the twenties it was a common experience to go over to Cook County Hospital and they always had 3 or 4 wards of pneumonia cases.

They had several wards of scarlet fever cases and diphtheria. We do not have those now, but we do have infectious disease, we do have morbidity, people get sick, we have not eliminated these micro-organisms and we are using micro-organisms, as Mr. Crockett indicated, as living systems whereby we can advance cancer work, we can use them for exploring for vitamins and all sorts of things.

Yet, this Institute, it seems to me, is one that has not been supported to the extent that it should be.

INFECTIOUS HEPATITIS

Now, with reference to infectious diseases, the problem of infectious hepatitis is one that is a kind of real problem in our hospitals today. We had over 14,000 cases reported in the United States last year.

Now we do not know what the cause of this is. It is supposed to be a virus. Nobody has ever been able to cultivate it. The incubation period in the disease from the time you pick up the agent until you get ill is something of a month or longer.

Recently we had 130 cases that occurred in Sweden among people eating raw oysters and they were able to trace directly these illnesses to the eating of oysters and it was subsequently shown that the oyster pen that they housed these oysters in had been contaminated with the excreta of a fellow that had infectious hepatitis. It so happened that these cases were in doctors and they remembered exactly where they had eaten oysters and almost to the exact time.

There is a disease that we have not accomplished too much with. We are making real headway with missiles. We have cultivated the virus and vaccine has been made which seems highly effective in animals. At the present time, work is being instituted to evaluate immunization of man. There are many other things such as influenza that we have made some progress with.

Just recently I have been trying to study the deaths from pneumonias in Chicago that occurred, say, from the 1st of October 1957

through February 1958. I find that we had 925 deaths in Chicago from pneumonias in that particular period.

If you take the corresponding 5-month period for 4 years before, the average per year was 625. So you have 300 more deaths.

In going through the autopsy records—I did not go through the autopsy records on 925 but I did go through 130 from 37 different hospitals—it was amazing to see the type of thing that has developed now as compared to some years ago.

There were a great many of those lungs that were filled with abscesses which means the staphylococcus, staphylococci were recovered from a good many of these.

When the influenza virus hits the lungs, the disease process gives rise to a good deal of fluid in the lung and makes it an excellent culture medium for whatever micro-organism might find its way in there.

This whole staphylococcus problem—I spoke on that 2 or 3 years ago as you recall—has not gotten any better. It has gotten worse. Dr. Sturr knew about this. He had lots of trouble with it in maternity wards back in 1880, but now this organism and some strains of it become very resistent to antibiotics. It does not matter what antibiotic you want to work with, it is not long before some strains of staphylococci become resistant to it.

Some of these strains produce a food-poisoning substance. In Crawfordville, Ind., a few weeks ago there were 500 cases. There are some types of germs that cause this food-poisoning substance that become very resistant to antibiotics and very quickly.

We have had pneumonia cases where the organisms were growing in the lung—the production of this food-poisoning substance in the lung—and the patient develops severe diarrhea and dies within a very short time,

We had 1 case in our hospital at the university; 1 person came in one night and she died before the next morning, and she had developed very severe diarrhea before death occurred.

I have found several other instances of that. Yet most doctors do not even recognize it. They attribute the whole affair to the pneumonic process. These are just examples.

In other words, we have gotten into—we have raised many new problems with our antibiotics. We have wiped out some of the deaths from infectious diseases. We have not wiped out the cases. There is a tremendous need for work on vaccines, immunization, for developing personnel. We are very short on personnel. Virologists you can hardly find today.

If we are going to get busy and do something about this, we are going to have to have more money. I have never seen an outfit that was more broke than this one in allergy and infectious diseases.

GRANT REQUESTS UNMET

When I was still on the study section we had application statistics 8 inches high which had been carefully screened, had been approved, and there was not a dime to pay for them. We have a lot more requests for training grants.

I understand that $650,000 was requested. At the present time it would take $1 million of that to take us through the June meeting, as I understand, and for the whole year I would think that $2 million would not be too much for training grants.

FUNDS NEEDED FOR PROGRAM

I think we need $5 million more for the research grant program to take care of those large number of applications we have there. Then we need $500,000 more for research fellowships, more than what was requested. I think until we can get more funds, we are not going to keep abreast of the job that we should be doing in this country.

Thank you.

Senator HILL. As you say, we have made definite progress but we also have developed more problems.

Dr. DACK. We have gotten new problems and people dying from things that they did not die of before.

Senator HILL. And ought not to have to die of?

Dr. DACK. That is right.

Senator HILL. Thank you, sir.

(The prepared statement of Dr. Dack follows:)

STATEMENT BY DR. G. M. DACK, PROFESSOR OF MICROBIOLOGY, THE UNIVERSITY OF CHICAGO

I wish to make some pertinent remarks with reference to support of the extramural program of the National Institute of Allergy and Infectious Diseases of the National Institutes of Health. As a member of the Board of Governors of the American Academy of Microbiology, I have been asked to speak in their behalf. Since I have served for a period of 5 years as chairman of one of the study sections and as a member of the Surgeon General's Advisory Council on Allergy and Infectious Diseases, I am familiar with the program.

The actual support needed for research projects, training grants, and research fellowships is far out of balance with the requests for these funds. Applications for these funds are very carefully screened by experts from universities and research organizations throughout the country. I have carefully looked into the problem of support for research grants, training grants, and research fellowships from other than Government funds without success.

At the present time there are many applications for which there are no funds. The number of approved, good applications for which funds are unavailable has been a source of discouragement to the experts who have so generously given of their time; furthermore, applicants are discouraged from continuing their work when support is not forthcoming.

The field of allergy and infectious diseases is one in which we need more and better trained personnel if a further reduction in morbidity and mortality is to occur. Although antibiotics have been a boon in lowering the mortality from certain diseases, the majority of the viral diseases are not affected by antibiotics. Cases of allergy have arisen as a result of the use of antibiotics.

No antibiotic or other chemotherapeutic agent has yet been found for the treatment or prevention for the common viral diseases, parasitic diseases, and fungal diseases. Promising work is being done on the development of vaccines which offer hope for prophylaxis. For example, the first microorganism discovered as causing disease, *Bacillus anthracis*, has been taken apart chemically, studied, and a vaccine prepared from some of the chemical components which shows definite protection. Other infectious diseases are being examined and an increased effort is being directed to the development of vaccines for viral, parasitic, and fungal diseases. However, unless financial support is forthcoming, studies of this type must be curtailed.

Research projects have been sponsored from the Institute of Allergy and Infectious Diseases in the field of measles, for example. At the present time the measles' virus has been cultivated and steps are underway for the development of a vaccine for man. The alleviation of the morbidity from measles and its complications should result from the development and use of an effective vaccine.

Another example is infectious hepatitis, an infectious disease which is becoming increasingly prevalent in the United States. Last year 14,806 cases were reported in the United States. Despite its incidence, our knowledge of the viral agent causing this disease is very meager and the virus has not been cultivated. There are many respiratory diseases caused by viral agents other than influenza and adenoviruses and studies in this field are being sponsored by the research grant

program. Also, there are many gastrointestinal infections apparently caused by viruses and this field, too, is being explored under the grant-in-aid program.

The problem of infections from antibiotic resistant staphylococci is becoming alarming among patients being cared for in hospitals. Conferences and symposia dealing with the subject have taken place in various areas of the country during the past year. Mothers and babies leaving maternity hospitals frequently develop infections within a few days after arriving home. These cases have been traced to antibiotic resistant staphylococci which were picked up in the hospitals.

In our laboratories we have studied some 30 cultures from patients dying from fulminating gastrointestinal disease caused by staphylococci contracted in hospitals as a result of intensive antibiotic treatment.

The grant-in-aid program has been of considerable aid in the development of immunization procedures for measles, poliomyelitis, influenza, and it is essential that the program be increased if a solution is to be found to relieve the suffering from the morbidity caused by the many agents of infectious disease.

The development of immunization procedures for poliomyelitis, tuberculosis, measles, influenza, anthrax and other respiratory diseases is still evolving; and there is still a long way to go in perfecting immunization procedures. Although the mortality from many of our infectious diseases has been greatly benefited by antibiotics, the morbidity problem is still with us.

For training grants only $650,000 has been requested in the budget by the administration. There is an urgent necessity for training young people in allergy and infectious diseases and in viewing the large number of requests for training grants the budget would have to be increased by approximately $2 million to meet current needs. There is urgent need in universities, hospitals, and public health laboratories for better trained people in allergy and infectious diseases. The research fellowships in this field are inadequately supported and good applications are far outnumbered by the money available to pay them. I would estimate that at least $500,000 in additional funds are necessary for this purpose.

In summary, based on the number of good applications coming in and those for which there is no money for payment, I would strongly urge that the extramural research grant program be increased by at least $5 million, the training grant program by at least $2 million and the research fellowships by $500,000 over the amounts requested. Unless the budget is increased at least by these amounts we would be failing in our national duty to develop the necessary able and competent personnel and advance our knowledge in allergy, parasitology, and virology, and in our numerous other responsibilities relating to infectious diseases.

Senator HILL. We certainly want to thank you for this most interesting information and challenging testimony you have brought us.

Dr. ALEXANDER. Thank you for the privilege of being here.

Senator HILL. Mr. Wilbur J. Cohen.

AMERICAN PUBLIC WELFARE ASSOCIATION

STATEMENT OF WILBUR J. COHEN, MEMBER, WELFARE POLICY COMMITTEE OF THE AMERICAN PUBLIC WELFARE ASSOCIATION, AND PROFESSOR OF PUBLIC WELFARE ADMINISTRATION AT THE UNIVERSITY OF MICHIGAN, ANN ARBOR

PREPARED STATEMENT

Mr. COHEN. Senator, here is a statement for the record.

Senator HILL. We will put it in full, Mr. Cohen.

(The statement referred to follows:)

Mr. Chairman and members of the committee, I appreciate the opportunity of appearing before you to testify with respect to the 1959 appropriations for the Social Security Administration. I am a member of the welfare policy committee

of the American Public Welfare Association, which association I represent here today.

The American Public Welfare Association is a national nonpartisan organization of local and State public welfare departments and of individuals engaged in public welfare at all levels of government. Its membership includes State and local welfare administrators, board members, and welfare workers from every jurisdiction.

Within the association are a number of national councils including a council representing all State administrators of public welfare, a council of local administrators of public welfare, a council of members of State and local boards of public welfare, and a council of child welfare directors, and five standing program committees of which the welfare policy committee is one.

We have six regional conferences each year and a nationwide meeting in alternate years at which we discuss current issues in public welfare and obtain the views of the membership. As a result of the discussions in all these groups the board of directors, representing all parts of the country, adopts official policy positions on issues of current significance for public welfare.

The official policy position of the association on Federal legislation is embodied in our "Federal legislative objectives, 1958" which I am submitting for inclusion the record.

The agencies and individuals making up the membership of the American Public Welfare Association are charged with the responsibility for administering the various assistance and service programs in public welfare under the several titles of the Social Security Act. In our membership are the people who have the responsibility for day-to-day administration of the programs for the needy aged, the needy blind, the needy disabled, needy dependent children, and child welfare.

Through our organization, we work toward constructive ways to help restore as many persons as possible in the public assistance caseload to self-care and self-support. Our members seek through protective, preventive, and rehabilitative services to help solve the problems of children and families who request the services of public welfare departments. We are constantly seeking ways to make our services more effective and to improve the caliber of administration in public welfare programs.

We have been in the forefront of those groups which have advocated broadening and strengthening our existing social insurance programs. We believe that the Congress should take further action to improve the social insurance program and thus further to reduce financial dependency. Because of the inadequacies in our social insurance programs, appropriations from general revenues for assistance are higher than would otherwise be necessary.

PROPOSED PUBLIC ASSISTANCE APPROPRIATION INADEQUATE

The budget request for Federal grants to States for public assistance is, in our opinion, inadequate. The request for $1,806,400,000 is made up of $1,681,400,000 for assistance payments and $125 million for administration and services. From reports we have obtained directly from State agencies, we believe the total amount requested is likely to be about $25 million too low and should be increased by this amount.

The serious unemployment problem has increased public assistance caseloads. Today there are about 6.2 million persons receiving public assistance of whom 5.3 million are on federally aided programs. In November 1956, there were 5.7 million persons receiving public assistance, of whom 5.1 million were on federally aided programs.

In addition, expenditures have increased because of the rise in the cost of living. Medical care costs have risen for over 40 consecutive months. Medical care is an important factor in eligibility for public assistance. Medical care costs have been rising twice as fast as the overall cost of living while hospital costs have risen nearly four times as fast as the general price rise.

The budget submitted to you was based upon economic and business conditions during the last half of 1957. All the evidence now indicates higher caseloads in aid to dependent children. This will also require additional administrative personnel. Based upon present knowledge, the appropriation estimates for both aid to dependent children and administration appear to be somewhat understated.

We feel that we would be remiss in our responsibilities if we did not emphasize to you that current economic conditions are having the effect of increasing the overall number on the public-assistance programs. The unemployed employables

are generally not eligible for assistance under the categories of old age assistance, aid to the blind, aid to dependent children, or aid to the permanently and totally disabled. The State and local governments, therefore, are having to appropriate increased funds to provide minimum help for the families involved. The federally aided categories also are showing the effects of current conditions, especially as relatives are unable to contribute to support their parents. Individuals with physical disabilities and educational limitations who are able to support their families when business conditions are good are often the first to be laid off and thus become eligible for assistance. Working mothers who are normally the support of their families soon apply for aid to dependent children.

THE OPEN-END APPROPRIATION

We would not be so concerned about the exact amount of the appropriation if the Congress adheres to the policy of open-end appropriations for public assistance. But, on two recent occasions, attempts have been made to modify the statutory authority in the basic law and to modify the moral obligation to pay the full Federal share.

The American Public Welfare Association has gone on record in opposition to any type of closed-end appropriation for public assistance administration in the Federal appropriations bill whether it be in dollars or in terms of a percentage of payments. The current policy statement on this point, adopted by the Board of Directors, reads as follows:

"The continuation of the Federal open-end appropriation is essential to a sound State-Federal fiscal partnership in all aspects of public assistance. Since it is not possible to predict accurately the incidence and areas of need, flexibility is necessary in financing public assistance programs."

We believe that a closed-end appropriation is directly contrary to the basic long-range policy Congress wrote into the Social Security Act. We believe that it is not in accord with sound Federal-State relationships for the Congress to change the regulations under which we operate in the various jurisdictions just before the new fiscal year. Most State legislatures will have adjourned by the time the appropriation bill becomes law. Estimates by these States of their needs for State and local administrative funds for the coming fiscal year, or for the coming biennium, have been based upon continuation of the basic Federal statute which provides for 50–50 matching of administrative costs. Splendid Federal-State cooperation and mutual confidence in the administration of public assistance programs have been built up during the past 23 years by strict adherence to the legal and moral responsibilities of both levels of Government. A unilateral change may seriously impair this relationship.

We request your support for the continuation of the open-end policy in administrative funds in the present law. We know that there is room for improvement in the administration of public assistance just as there is in any governmental program. We do know, however, that as long as the States and localities are paying one-half of the total cost of administration and service for these programs we have builtin protection for Federal funds. State and local appropriations are closely scrutinized by the appropriating bodies. We believe that the partnership principle set up in the law should be carried out without other arbitrary limitations.

Any abrupt change may adversely affect the welfare of the more than 5 million persons receiving public assistance. With the rising cost of administration of all governmental programs due to factors beyond our control, any limitation at this time will work hardships in most if not all States. Staffs will have to be reduced. Visiting services to clients will have to be curtailed with little possibility of expanding services as provided so clearly in the 1956 amendments. The adequacy of investigations with regard to financial need will be affected, an unsound business proposition. In fact, the administration of the public assistance programs can only be jeopardized by such a restrictive step.

For those States which have local administration of public assistance and which have a sizable contribution toward local administration from city and county governments, a Federal ceiling will in turn make it necessary for the States to impose ceilings upon the counties. In other words, this matter of control would mean not only more Federal control of State operations but, inevitably, more State control of local operations. Thus the philosophy of Government and the principles involved are found to be of as much or more significance than the question of the actual amount of money. In reviewing the total situation and the grave problems inherent in any change at this time for the States, we recommend that you retain the flexibility so wisely incorporated in the basic law, a flexibility which has been tested by 22 years of experience.

TRAINING AND RESEARCH FUNDS

Social security payments now total over $20 billion annually, of which $3 billion is for public assistance. These amounts are increasing.

Yet, the amounts being spent for training of qualified workers in public assistance and for research in reducing dependency are very small. We believe an investment in training of public welfare personnel and research on dependency will pay large dividends.

The training and research amendments of 1956 were added to the social security legislation in that year by amendments adopted by the Senate Committee on Finance. We urge that you implement them by appropriations.

Training of public welfare personnel

The American Public Welfare Association urges inclusion in the 1959 appropriation bill of the $2½ million requested by the President and the Department of Health, Education, and Welfare in 1958 to increase and improve the supply of professionally trained welfare personnel.

The shortage of trained workers in public welfare is serious. If the number and quality of trained personnel can be increased, we shall be in a far sounder position to help more recipients of public assistance to help themselves through becoming able to take care of themselves, or to become self-supporting, or to strengthen family life.

The problems involved in obtaining and retaining adequately trained personnel for the administration of public assistance programs is becoming more acute every day. The competition for personnel trained primarily in the social work field from business and from private agencies is serious. Our personnel carry heavy responsibilities. Individual workers in some States have a caseload which involves payments of over $100,000 per year. We need well qualified workers to carry this kind of responsibility, responsibility not only for the proper determination of the recipients of such large sums of money but also responsibility to help those recipients help themselves.

In 1954, because of the high turnover rate, about one-fourth of all persons in public assistance social work positions were new to their jobs. Their educational qualifications were slightly lower than those of the workers who had left. The same situation persists today. And the educational qualifications of practically all of the workers are lower than is sound in order to do the most effective job. We need better trained personnel in our programs. The States are eager to put into operation the 1956 authorization for the training of public-assistance workers.

The Congress has made available substantial amounts for training in the public-health field, in the mental health field, and in vocational rehabilitation over a period of several years. We believe the experience has demonstrated the wisdom of such appropriations. It appears time that the services available through public welfare should also be strengthened through specific appropriations for staff training.

The most serious problems of individuals and families in the community come eventually to the public-welfare department. We need trained personnel fully to understand the needs of those individuals and families and then to work with them in terms of providing resources to help meet their needs and in turn to provide services as constructively as possible. For these reasons, we urge you to include a $2½ million appropriation for the training of public assistance workers in the 1959 appropriation bill now before you.

Research and demonstration projects to minimize dependency

The 1956 amendments to the Social Security Act authorize $5 million for cooperative research and demonstration projects to learn more about the causes of dependency and to find more effective means of dealing with this problem. The President and the Department of Health, Education, and Welfare requested $2,080,000 for the implementation of these areas in 1958 for the first year of operation. Our association believes that this is a far-reaching and significant approach to the whole problem of dependency in our society, and we urge you to include this appropriation in the 1959 bill.

As administrators, we constantly find ourselves faced with questions to which we do not know the full answers. If we knew more about why families break down, why some children become delinquent, how better to motivate dependent persons to become more self-reliant, and the answers to similar questions, we could provide far more constructive services for dealing with the problem of dependency. We seek ways and means of preventing the basic problems with

which we deal. Too long has our approach been of necessity ameliorative in focus rather than preventive and rehabilitative.

This committee has every right to take pride in its accomplishments in advancing medical science and medical care through providing for basic medical and health research in the National Institutes of Health. The results have been and will continue to be of tremendous significance. We are requesting that you invest a very small amount in relation to the investment in medical research. Such an investment will help us understand better the social and economic problems of individuals and families with which we deal and to help us find ways to provide more effective types of services to help people lead more productive lives and to help themselves in every way possible.

RESEARCH AND PROGRAM PLANNING IN OFFICE OF THE COMMISSIONER OF SOCIAL SECURITY

We wish to commend the subcommittee and the Congress for the increases it included in the 1958 appropriation bill for the Office of the Social Security Commissioner. We believe these increases were desirable. However, as already pointed out, we are spending as a Nation over $20 billion for social security and are expending only a relatively small amount on how to improve our social-security programs and minimize the need for assistance. We urge that you expand the resources of the Commissioner's office to prepare the necessary research reports needed by Congress, the States, and the American people for the constructive and intelligent development of all our social welfare programs. Particular attention needs to be paid to the various complex proposals for modernization of the old-age, survivors, and disability insurance program and the public assistance programs. If the Congress expects to consider basic changes in the social security program in the next few years, we believe you should provide the Commissioner now with the additional staff to develop the information needed. It takes time and competent staff to get the information Congress needs and deserves to make decisions on such vital matters affecting millions of people and billions of dollars.

We endorse the $550,000 included for the office of the Social Security Commissioner which consists of a direct appropriation of $314,000 and an authorization to use $246,000 from the OASI trust fund.

The Office of the Commissioner through its Division of Program Research is responsible for the development of the overall series of statistical reports made by the Government on the growth of voluntary health insurance protection, disability insurance, all Federal grants-in-aid, and all social welfare expenditures. This statistical information is used by congressional committees, employers organizations, unions, welfare organizations and independent research groups. It is a necessary requirement for sound policy development. The Division has just developed a new series on contributions and expenditures on employee health, welfare, and pension plans which will be very useful.

The Division is also responsible for making studies of the health costs of the aged. It published a report on this subject in 1956. Current information should be compiled on this subject and published. We urge that you increase the pending appropriation by about $10,000 in order to make it possible to expand the Division's work in the field of financing health costs of the aged.

CHILD WELFARE FUNDS

While we endorse the $11 million included in the House bill for child welfare services, we should like to point out that the Social Security Act, by an amendment adopted in the Senate in 1956, authorizes an appropriation of $12 million annually. The American Public Welfare Association, on the basis of its knowledge of child welfare conditions throughout the country, strongly believes the full $12 million is urgently needed for fiscal 1959, in view of the increased numbers of children and the rising price level.

There are over 65 million children under the age of 18 at the present time. This number is increasing at about 1 million annually. By 1965 the number is estimated to be 70 million. For the past several years over 4 million babies have been born annually.

We know that it is economically sounder in terms both of dollars and of the welfare of children to provide basic services needed by children so that they will not get into trouble and come before the courts as delinquents.

We need to be able to provide specialized care as needed to children who rae not developing normally whether it be physically, mentally, or emotionally.

We are concerned also about greater protection for children who become available for adoption.

We know that we need far sounder planning so that we may provide the particular type of care which a given child needs at a given time, whether it be within his own home, within a good foster home, or within a carefully selected institutional setting. These are essential if the welfare of children is to be protected.

Amounts of money involved in child welfare services are small in relation to the total Federal budget. In terms of the welfare of children, they are of inestimable importance.

Let me amplify some of the reasons why we believe the full $12 million appropriation is urgently needed at this time.

As of June 30, 1957, only 51 percent of the 3,187 counties in the United States had the services of public child welfare workers giving full time to child welfare services. Fifty-four percent of the 2,489 rural counties and 30 percent of 698 urban counties did not have such full-time services.

The first step that should be taken in child welfare programs is to achieve wider coverage of services. In the counties now having the services of a public welfare worker, the average ratio of child welfare workers to child population is 1 worker per 10,000 children—a ratio which is too large for effective service to all who need it.

What are some of the major problems in child welfare which need attention:

1. A number of courts are beginning to request the services of child welfare workers in divorce and other cases. These services include problems in custody and support of minor children, actions relative to children who have been deserted, abandoned, neglected, or not properly supported by their parents.

2. State and local communities are indicating the need for funds to help them in the extension and improvement of foster care programs. These needs include assurance that the foster care is suitable to the child's special needs. Such special needs are those of emotionally disturbed children, adolescent youth, the handicapped child and those needing temporary care.

Among the social factors that are reported by the States as affecting the current need for foster care are the following:

Great mobility of the American population with families lacking close ties to relatives when problems arise.

Increase urbanization and movement away from rural areas.

Introduction or expansion of defense plants and military installations that create problems in the communities affected.

Increasing employment of mothers.

Economically distressed areas and areas of underemployment where social problems abound but where resources are greatly limited.

3. States and communities are just beginning to give consideration to protection and care to those children whose mothers work. Although a number of welfare departments have extended their services in setting standards and licensing of day care centers, few have had the funds to establish and operate such centers where they are needed.

4. States need to strengthen and improve adoption services. There is much in the newspapers and magazines, the television and radio these days about adoptions, particularly about the dangers of the black market in babies—the sale of babies for profit. Babies are being drained off into the black and gray markets at the same time that agencies are being criticized for not meeting couples' requests for children to adopt. State and local public and voluntary child placing agencies are aware of the need to improve adoption services. In order to "wipe out" the black market in babies, help must be provided to unmarried mothers in solving their problems and in planning for the welfare of their children.

SALARIES AND EXPENSES, BUREAU OF PUBLIC ASSISTANCE

The bill passed by the House increases the amount for salaries and expenses for the programs administered by the Bureau of Public Assistance by $80,000. We support this increase but wish to point out that much more needs to be done to provide the Bureau with adequate appropriations to do its job properly.

There are many gaps in the type of information, particularly in the knowledge of the various methods followed by States in carrying out their responsibilities. We feel it is important to have more work done by the Bureau of Public Assistance

and the Children's Bureau to make available promptly to States information of various kinds together with a comparative analysis of States efforts in many of the highly complicated aspects of health and welfare programs. This is the type of work which can be done most economically by the Federal staff and, in some respects, the Federal agency is the only source of this information.

The staff of the Bureau of Public Assistance needs strengthening in order to enable the Bureau to provide the States with technical consultation and help in some areas of administration. Let us take medical care for example: A number of States are now providing a significant amount of medical care for the first time as a result of the 1956 legislation. This is a highly technical area involving complex problems of relationships to the suppliers of medical service, relations to other public and private programs, fiscal procedures, and the like. States need to have help from qualified consultants who are familiar with the way the programs are handled in other States and who can give advice on effective ways of dealing with the problems other States now face.

In other areas as well, the Bureau should be better equipped to help the States: In the areas of self-support and self-care services, in the development of training plans for staff, in the development of simplified procedures for determining need, in techniques of administrative management, to name some of the most important. With additional specially trained staff, the Bureau could provide the States with technical assistance and this would help reach the goal of more effective State administration of public assistance.

I should particularly like to point up the need for expanding the Division of Program Statistics and Analysis in the Bureau of Public Assistance by 2 or 3 positions. This Division is responsible for preparing all the basic data for the appropriation requests; planning and collecting the monthly and annual statistics on the number receiving assistance, the average monthly payment, total amounts expended per capita, in relation to per capita income and by source of funds, the proportion of the population receiving assistance by categories and the proportion receiving both assistance and insurance, the amount spent on medical care; and also for making all the estimates of the costs of the numerous bills introduced by Senators and Representatives for changes in the public assistance program.

Yet, there are many aspects of public assistance on which the Congress and the States should have information for policy formulation but which is not available because this Division does not have the manpower to carry out its responsibilities. Three areas for exploration are suggested.

1. Study of general assistance

For instance, at the present time we ought to know how the States are handling the problem of needy unemployed persons applying for general assistance.

A study of general assistance is very desirable. We suggest that the committee supply the necessary funds to the Bureau to employ staff to work with the States to make a study of the economic and social characteristics, and health status and needs for medical care of recipients of general assistance, and of fiscal and administrative aspects of the general assistance program. Such a study is needed to provide comprehensive detailed information about the general assistance program which is financed wholly from State and local funds. In addition to information on age and sex of recipients, amount and duration of assistance payments, it should include such items as composition of the family in terms of employment history of its members and their employment potential income, and resources. State and local provisions for financing and administering the program and eligibility requirements should also be included to provide a base against which to evaluate the other findings. This is of particular importance in making State comparisons or in considering new legislation.

2. Study of medical and social characteristics and rehabilitation potential of incapacitated parents in aid to dependent children families.

A study should be conducted of incapacitated parents in aid to dependent children families to determine nature and cause of disability, duration of disability, medical and other services provided by the agency, referrals to vocational rehabilitation, and services provided by that agency. The study would help in determining the extent to which agencies are providing services that may result in alleviating physical and other handicaps of disabled parents and in lessening their degree of dependence. This study should be part of a larger study on the rehabilitation potential of public assistance recipients.

3. Volume and costs of medical care for public assistance recipients

Amounts spent for medical care of recipients of the special types of public assistance are constantly increasing. Most States need data that will enable them to identify the factors that are contributing to the continuing rise in costs.

A plan should be developed to enable States to obtain information on medical care. An effort should be made to interests as many States as possible in using the plan to collect data for a selected period of time. The Bureau should make the results of studies completed available to all State agencies.

Both the number of public assistance recipients provided nursing home care and assistance expenditures for such care have risen markedly in recent years. To understand and interpret this development and to provide such care more effectively, the Congress, State public assistance agencies and the Bureau of Public Assistance need more information than is available on the characteristics of recipients needing such care, the kinds of services they need and receive, the costs of care in relation to services provided, and the extent and adequacy of available resources for such care. A plan that State public assistance agencies can use to produce these items of information on a uniform basis should be developed. This study should be part of a larger study on all assistance recipients who live in any kind of an institution, public or private.

CONCLUSION

In conclusion, may I again point out that the 1956 Social Security Amendments expanded services directed toward self-support and self-care, provided for services for the maintenance and preservation of family life, provided for medical services for needy individuals, and established programs for the training of public welfare personnel and for research into the problems of dependency. These amendments were adopted less than 2 years ago and have been heralded throughout this country. In our opinion, they are highly significant amendments. We ask that you now implement them through this appropriation bill.

We in the American Public Welfare Association, through our official responsibilities in the States and localities, deal each day with thousnads of needy persons and families who apply for financial assistance and for a broad range of services. We know the problems of needy and troubled people at first hand, people who cannot manage in our complex civilization without help. It is because of this experience and the fact that we know that we can strengthen the kinds of services which they require and in turn strengthen our human resources that we request this committee:

(1) To appropriate for the States the full amount authorized for State and local child welfare services;

(2) To appropriate funds to implement the law for the training of State public assistance personnel;

(3) To appropriate funds to implement the law for research and demonstration projects to investigate causes of dependency and more effective ways of dealing with this basic problem;

(4) To make a modest increase in funds for salaries and expenses of the Bureau of Public Assistance;

(5) To make a modest increase in funds for the office of the Commissioner of Social Security, and

(6) To appropriate the full amount needed for State and local assistance payments, administrative and service costs so that we may continue our well-established Federal-State partnership in administration.

FEDERAL LEGISLATIVE OBJECTIVES, 1958

Prepared by Committee on Welfare Policy, approved by the Board of Directors December 3, 1957, American Public Welfare Association

The American Public Welfare Association believes that the States and their political subdivisions have the primary responsibility for developing and administering public welfare functions in the United States. The Federal Government has the obligation to develop nationwide goals and to use its constitutional taxing power to equalize the financing of public welfare so that public welfare services may be available on a reasonably equitable basis throughout the country. The

association's legislative objectives are based on these premises and on recognition of the importance of encouraging self-responsibility and assuring humanitarian concern for individuals and families.

To accomplish these purposes the association believes that—

Contributory social insurance is an effective governmental method of protecting individuals and their families against loss of income due to unemployment, sickness, disability, death of the family breadwinner, and retirement in old age;

Public-welfare programs should provide services to all who require them including financial assistance, preventive, protective, and rehabilitative services, and should be available to all persons without regard to residence, settlement, or citizenship requirements;

The benefits of modern medical science should be available to all; and to the extent that individuals cannot secure them for themselves governmental or other social measures should assure their availability;

Democracy has a special obligation to assure to all the Nation's children full opportunity for healthy growth and development.

These general principles are amplified in other policy statements approved by the board of directors of the association. The welfare policy committee of the association has reviewed all of these statements in the light of current needs and has developed specific legislative objectives for 1958. While the following list does not include all of the association's policy positions, it presents in condensed form those legislative objectives which are most likely to be of current significance.

PUBLIC WELFARE PROGRAMS

Scope of program

1. The comprehensive nature of public welfare responsibility should be recognized through Federal grants-in-aid which will enable the States to provide financial assistance and other services not only for the aged, the blind, the disabled, and dependent children, but also general assistance for all other needy persons.

2. Federal financial aid should be available to assist States in carrying out their responsibilities for preventive, protective and rehabilitative services to all who require them.

3. The Federal Government should participate financially only in those assistance and other welfare programs which are available to all persons within the State who are otherwise eligible without regard to residence, settlement, or citizenship requirements.

4. The aid-to-dependent-children program should be strengthened by providing Federal aid to the States for any needy child living with any relative.

5. Specific provisions should be made for Federal financial participation in the maintenance of children who require foster care.

6. Restrictions limiting use of Federal child-welfare services funds to rural areas and areas of special need should be removed.

7. Federal financial assistance should be made available to the States in programs for the prevention and treatment of juvenile delinquency, including research and the training of personnel.

8. Additional Federal funds should be provided to the States to help meet the needs of mentally retarded and other handicapped children.

9. The category of aid to the permanently and totally disabled should be modified through eliminating the Federal restriction requiring a disability to be permanent and total and through eliminating the age requirement.

10. The Federal Government should participate financially in the development of specialized services for the aged, irrespective of financial need.

Methods of financing programs

11. The continuation of the Federal open-end appropriation is essential to a sound State-Federal fiscal partnership in all aspects of public assistance. Since it is not possible to predict accurately the incidence and areas of need, flexibility is necessary in financing public assistance programs.

12. Federal participation should be on an equalization grant basis provided by law and applicable to financial assistance (including medical care), welfare services (including child welfare), and administration.

13. No change should be made at this time in the Federal matching formulas which would result in a reduction in the Federal share of assistance, services, or administration.

14. Federal maximums on individual assistance payments should be removed. So long as Federal legislation sets maximums on Federal participation in public assistance payments, such Federal financial participation should be related to the average payment per recipient rather than to payments to individual recipients.

15. Federal maximums on medical-care payments in public assistance should be removed. Until such maximums are removed, provision should be made both for matching of average vendor payments for medical care within any assistance ceilings and for maintaining the separate matching basis for medical care.

16. Federal aid for public assistance should be on the same basis for Puerto Rico and the Virgin Islands as for other jurisdictions. In particular, the annual dollar limitations on Federal participation should be removed.

17. The funds authorized and appropriated for child-welfare services in the Social Security Act should be increased to an amount sufficient to stimulate and support the development of adequate State programs.

18. Provision should be made in the law for redistribution of Federal funds appropriated for child welfare services so that allotments not used by a State in any year could be redistributed to other States or could be made available to that State the following year.

19. The Federal Government in cooperation with the States should study the restriction on Federal financial participation in assistance payments to adults living in public nonmedical institutions.

20. The Federal Government should participate financially in the costs of any State and local civil-defense welfare services.

21. Federal legislation should provide funds for repatriation from abroad of American nationals in need of assistance.

Administration

22. Adequate and qualified personnel is essential in the administration of public-welfare programs. Federal financial participation in administrative costs of State welfare programs should be sufficient to enable States to provide for the adequate administration of all welfare programs.

23. Adequate Federal funds should be authorized on a permanent basis to assist States in training staff for State and local public welfare programs and moneys should be appropriated for this purpose.

24. Public-welfare programs in which the Federal Government participates financially should be administered by a single agency at the local, State, and Federal level.

25. Federal, State, and local public welfare agencies should participate in and assist in the administrative coordination of all related programs in which there is Federal financial participation.

26. The administration of the Children's Bureau should be maintained within the Social Security Administration.

SOCIAL INSURANCE PROGRAMS

OASDI

27. The contributory old-age, survivors, and disability insurance program, as a preferable means of meeting the income-maintenance needs of people and as a means of keeping the need for public assistance to a minimum, should be strenghthened by making benefit payments more adequate; by increasing the amount of earnings creditable toward benefits to keep that amount in line with current conditions; by providing benefits for disabled insured persons of any age and for their dependents; by extending coverage to earners still excluded. To the extent that these changes increase the cost of the program, contributions should be increased to insure the financial stability of the program.

28. Hospitalization costs of old-age, survivors, and disability insurance beneficiaries should be financed through the insurance program.

29. The funds of the insurance program should be available to help restore disabled people to gainful employment where it reasonably appears such expenditures would result in a net saving to the fund.

30. The membership of the Advisory Council on Social Security Financing, established by the 1956 amendments, should include representation from public welfare and its functions should be broadened to include responsibility for recommending improvements in all aspects of old-age, survivors, and disability insurance, with particular emphasis on methods of keeping the program in line with current economic conditions and with changes in levels of living.

31. Adequate and qualified personnel are essential in the administration of the old-age, survivors, and disability insurance program. Federal funds should be made available for the training of staff in institutions of higher learning.

Unemployment insurance

32. The unemployment insurance program should be strengthened with respect to extension of coverage, adequacy of benefit payments and duration, and less restrictive eligibility and disqualifications provisions.

Other social insurance

33. Study should be given to ways of improving and extending temporary disability insurance benefits and workmen's compensation programs.

RESEARCH AND DEMONSTRATION PROJECTS

34. Federal funds should be authorized and appropriated for research and demonstration projects in all aspects of social security and public welfare.

RELATED PROGRAMS

35. The Federal Government should provide leadership, funds, and research for the promotion of health and the prevention of sickness and disability contributing to dependency. In particular, the amounts authorized and appropriated for maternal and child health and crippled children's services in the Social Security Act should be increased.

36. Federal financial participation in the vocational rehabilitation program should be available to serve all vocationally handicapped persons who present reasonable possibilities of attaining a vocational objective.

37. The Federal Fair Labor Standards Act should be amended to extend coverage and to increase the minimum wage in line with current conditions.

Child Welfare Services

Mr. Cohen. I will just talk on a few specific points. Before I do so, I would be remiss in my duty, Senator, if I did not say, not only in my responsibility in the American Public Welfare Association but also in my past connection with the Department of Health, Education, and Welfare and since I also teach these subjects to a lot of young students coming up, how appreciative we are of the great leadership which you have provided this committee in the whole field of health, education, and welfare.

Senator Hill. You are very kind, Mr. Cohen. You know how much I have learned from you and how much I have sought and received your help on many of these items.

(A brief recess was taken.)

Senator Hill. We will go on the record.

Mr. Cohen. I will be very brief, Senator. If you will look on the last page of my testimony I will just summarize the thing with you right there.

First, as other witnesses have requested, we would like to see the full $12 million appropriated for child-welfare services.

Senator Hill. The budget, you know, allowed $10 million and the House raised that to $11 million. You would like to see us raise it on up to $12 million, which would be the full amount of the authorization?

Mr. Cohen. That is correct.

If you remember, Senator, if I can recall to your mind, that $12 million authorization was an amendment put in on the floor of the Senate in 1956 by Senator Lehman, accepted by Senator Byrd and Senator Johnson, unanimously went to conference, and was adopted. So it is a Senate amendment and I have put in here a rather extensive

justification on the growth and number of children in the States and the problems for them. As you know, the other two grants—for maternal and child health—are up to their maximum authorization.

There is only one thought. We support, as other groups do, as soon as practicable, that the appropriation for child-welfare services be made the full amount.

TRAINING AND RESEARCH

On items 2 and 3, you have heard us and other groups talk about the importance of the money for training and research and we know what you have done in the past on that. We are very hopeful that the administration again will submit a proposal on that, and I have included some justification of what can be done in that area.

I just want to point out one fact to you, which you might keep in your mind, and that is that these individual and caseworkers in some States, in public assistance, have a caseload which involves responsibility for making payments of over $100,000 a year per person, per caseworker. Now that always brings home to me the importance of having good people, well paid, well trained, to do this job, because there are nearly 6¼ million people receiving public assistance now.

That is $3 billion a year of Federal, State, and local funds and I have no doubt, just like you have done in medical research, if at sometime we actually got into this, in the long run, not in the short run, that we could do something about cutting this down to size.

Senator HILL. I dare say that is true.

Mr. COHEN. And the problem is going to get more severe.

AID TO DEPENDENT CHILDREN PROGRAM

An example is in the aid to dependent children program. As you know, the rolls are increasing in this present situation for the first time in history and now aid to dependent children is even larger than old-age assistance. No one ever contemplated that.

Senator HILL. That is very surprising.

Mr. COHEN. It is going to grow, largely, of course, because of the number of children. The proportion of children getting aid is not so very large, about 3 percent of the population, but there are actually today more children and their parents on aid to dependent children than there are on old-age assistance. We have made remarkable progress on the aged. We have to do something about this family breakdown that relates to the aid to dependent children program. We have done a number of research studies.

If we had time, I could tell you, just like the medical people did, of the prospects there, but we are not going to make any promise in that unless you really supply some money for that program.

BUREAU OF PUBLIC ASSISTANCE FUNDS

Now on items 4 and 5, I would like to just take a minute or two. We are asking for a modest increase in funds for salaries and expenses of the Bureau of Public Assistance and for the Office of the Commissioner of Social Security. If you turn to page 10 of my testimony, I would just like to read a few brief paragraphs.

We endorse the $550,000 included for the Office of the Social Security Commissioner which consists of a direct appropriation of $314,000 and an authorization to use $246,000 from the OASI trust fund.

The Office of the Commissioner, through its Division of Program Research, is responsible for the development of the overall series of statistical reports made by the Government on the growth of voluntary health insurance protection, disability insurance, all Federal grants-in-aid, and all social welfare expenditures. This statistical information is used by congressional committees, employers organizations, unions, welfare organizations, and independent research groups. It is a necessary requirement for sound policy development. The Division has just developed a new series on contributions and expenditures on employee health, welfare, and pension plans which will be very useful.

NEW LEGISLATION

And, of course, I speak here in connection with the new legislation passed in 1956.

The Division is also responsible for making studies of the health costs of the aged. It published a report on this subject in 1956.

Now, this is an important area in which I know you have a great interest in because of your concern for older people.

Current information should be compiled on this subject and published.

This should be done each year to see what voluntary health insurance is doing in the field in meeting the financial costs of covering medical care for the aged.

Senator HILL. That is, keep up to date.

Mr. COHEN. Keep up to date.

Now, what we are urging you is that by putting about $10,000 more in this Division, you could expand this work in the field of financing health costs to the aged so that there would be up-to-date information, as there is on other voluntary health insurance and so on, that would give your other committee the basic data for formulating policies as to what to do about meeting the health costs to the aged.

VOLUNTARY HEALTH INSURANCE

This is the kind of report that the committee has made to voluntary health insurance for the entire population [indicating]. They get that out each year and that is the basic information dealing with the whole growth of voluntary health insurance for the general population business.

Senator HILL. They do not have the breakdown as to the aged?

Mr. COHEN. That is where we are not in such a good position. Now they have done very extensive studies on the money income of the aged as far as their cash position is concerned. But what we really need now is the building up of a series of information papers on how many old people have what kind of health insurance, how extensive it is, whether it is just hospitalization, whether it is just surgical care, whether it is comprehensive, how many of them, when they leave employment, and so on. I am making this point because I feel so strongly that your Committee on Labor and Public Welfare is not in as strong a position to make substantive legislative investigations of this without basic research material.

FUNDS NEEDED

I have no idea whether $5,000 or $10,000 is the amount that is necessary, but with a very small amount of money we would be able to have the necessary information for your committee and to take intelligent action on this. I feel strongly that there is going to be a key legislative issue here in the years to come. I would not like to see your committee be in a position—when you decided to move, or if it were the Committee on Finance, in case it were related to something on improvement of the social security program—to not have the basic information that is necessary.

So that is my first suggestion, that we look forward to really building that information up.

PUBLIC ASSISTANCE

With respect to the Bureau of Public Assistance, if you will turn to page 14, there what we would like to ask for is 2 or 3 positions additionally in the Bureau to work particularly on the problems that I have identified here on pages 15 and 16, the study of general assistance in the States. I have listed this at the bottom of page 15; on page 16, a study of the medical and social characteristics of rehabilitation potential of incapacitated parents in aid to dependent children families; and then on the item of "Volume and Costs of Medical Care for Public Assistance Recipients," which is on page 17.

Those are the three areas in which I think the Congress needs more information to take intelligent action on these programs, of the growing problem. Two or three positions in the Bureau there would certainly make it possible for us to have extensive information to deal with these new programs.

As you know, in 1956, in part through your cooperation, Congress added an amendment to the law to finance half of the costs of medical care for the persons in public assistance. This is growing rather rapidly. We are spending about $300 million a year on that now and the best estimate I have made would indicate that it will go up to about $500 million a year by 1960.

The number of older persons is increasing and while the number on old-age assistance is declining, we are going to get to a situation where practically all of those people will have very extensive medical-care needs.

As pointed out earlier today by Dr. Hilleboe we are going to have to spend more on rehabilitation and more on medical care for those people. We do not really know today what is being done in that medical-care field.

We won't be able to answer your questions intelligently in 1960 unless we begin to do some studies in the States about that now. So I suggest that you give some consideration to seeing that the Department begins to collect that information and analyzes it nationwide, which I do not think they are in a position to do at the present time.

Finally, might I say that we, of course, urge that you appropriate the full amount needed for State and local assistance payments in the total budget. We think the amount that is in the budget is probably likely to be slightly less than what is necessary because these

rolls are going up, they have increased as a result of the recession situation. While I think there are about $25 million too little on the budget estimate, from our own studies, as long as it is an open-end grant, you can make a deficiency appropriation with respect to that.

So these are our recommendations at the present time and we hope that you can give them serious consideration.

Senator HILL. Well, I certainly want to thank you, Mr. Cohen, for coming here. As I said in the beginning, I worked with you in many instances and you have always been very fine and always most helpful and you have always had a contribution to make, always, and we deeply appreciate this testimony here today.

Mr. COHEN. Thank you, Senator.

Senator HILL. We will recess until 10 o'clock tomorrow morning.

(Whereupon, at 4:15 p. m., Wednesday, May 14, 1958, the subcommittee recessed to reconvene at 10 a. m., Thursday, May 15, 1958.)

LABOR—HEALTH, EDUCATION, AND WELFARE APPROPRIATIONS, 1959

THURSDAY, MAY 15, 1958

United States Senate,
Subcommittee of the Committee on Appropriations,
Washington, D. C.

The subcommittee met at 10 a. m., pursuant to recess, in room F-82, the Capitol, Hon. Lister Hill (chairman of the subcommittee) presiding.

Present: Senators Hill, Stennis, Thye, and Potter.

Health, Education, and Welfare

Rocky Mountain Laboratory at Hamilton, Mont.

STATEMENT OF HON. JAMES E. MURRAY, SENATOR IN CONGRESS FROM THE STATE OF MONTANA

General Statement

Senator Hill. The committee will kindly come to order.

We are very happy to have with us our friend the senior Senator from Montana, Senator Murray. I may say that Senator Murray is a former chairman of the Labor and Public Welfare Committee, and he and I have served on that committee together. That committee has jurisdiction over all health legislation, and the cause of health has had no better nor stronger friend than Senator Murray.

We are certainly glad to have you here this morning, Senator.

Senator Murray. Thank you very much for that kind introduction.

Senator Hill. You may proceed, sir, in any way that you see fit.

Senator Murray. I have a prepared statement here.

Mr. Chairman, in presenting this brief I speak not only for myself but also for the entire Montana congressional delegation, including Senator Mike Mansfield, Representative Lee Metcalf, and Representative LeRoy Anderson.

CONSTRUCTION OF ANIMAL HOUSE

I ask for an appropriation of $150,000 with which to construct an animal house at the Rocky Mountain Laboratory at Hamilton, Mont.

Investigations at this Laboratory have taken a direction which requires use of larger numbers of sizable animals than has been true in the past.

In particular, space is needed for breeding and use of guinea pigs and, especially, rabbits. Neither can be bought commercially in the area. Animals have been shipped from Bethesda to Hamilton, a procedure which is both unsatisfactory and expensive.

The lines of research for which these animals are needed include various studies on tuberculosis. There is rather exciting evidence that it may be possible to produce a vaccine against tuberculosis by a process involving isolation of specific parts of the tubercular bacillus. This is very exacting and complicated research, and it can be carried on effectively only with the use of rabbits for testing purposes.

SPACE FOR ALLERGY AND INFECTIOUS DISEASE RESEARCH

In addition to research on tuberculosis, the National Institute for Allergy and Infectious Diseases is anxious to extend its investigations relating to allergies. There is no space at Bethesda to carry on this important work at this time. The Rocky Mountain Laboratory has personnel highly skilled in this field. But again the rabbit is the ideal experimental animal for studies of allergic problems and, in the absence of the animal house, space is not available at the Laboratory for the animals.

Mr. Chairman, you are, I know, aware of the great work that has been done and is still underway at the Rocky Mountain Laboratory, which was the sole wartime producer of the essential yellow-fever vaccine. There have been wonderful accomplishments at the Laboratory on tick fever, encephalitis, and various other diseases found in the Western States.

Firm plans for the expanded studies, which hold so much promise for the improved health of mankind, were developed too late for inclusion in the President's budget. However, planning money was available and an architect is already drawing up plans for the animal house. Thus, construction of this needed facility could begin almost immediately, following completion of the plans and appropriation of the needed funds.

It is my sincere hope, Mr. Chairman, that your committee sees fit to appropriate $150,000 for the animal house, construction of which will help offset the severe recession in Montana and contribute greatly to the Rocky Mountain Laboratory's excellent research program which is developing effective means of combating disease.

DIVISION OF INDIAN HEALTH

Additionally, may I urge your committee to increase the amount appropriated for construction of Indian health facilities and for program activities of the Division of Indian Health.

The House provided $750,000 with which to construct a few of the Indian community hospitals authorized last year by Public Law 151, which was guided through the Senate Committee on Labor and Public Welfare last year by the able chairman of this subcommittee.

I and other members of the Montana delegation ask that the amount appropriated under this program be increased to $1,750,000. This amount will not permit construction of all needed hospitals under this program. But it will permit the program to get off to a realistic start.

The increased appropriation will also make possible the construction of a new hospital, to replace a firetrap, at Polson, Mont.

Construction of this urgently needed Montana facility will be impossible during the next fiscal year if the appropriation is not increased.

INCREASE IN GENERAL HEALTH FACILITIES

I also ask that the budget request of $40,225,000 for Indian health activities be increased to at least $45 million, to permit the Public Health Service to meet demands placed upon it. There are thousands of Indians in my State. They write many letters to me. They come to Washington to see me, and I know how much they appreciate the remarkable work that has been done for them by the Public Health Service since it took over responsibility for Indian health.

Tuberculosis, as you know, has long been the scourge of the Indian population. But during these 3 short years since the Public Health Service took over responsibility for Indian health, the TB death rate among Indians has dropped 25 percent.

The May 1958 issue of Treasure State Health, published by the Montana State Board of Health, reports that tuberculosis continues to be the most important communicable disease problem in Montana.

Of the eight Northwestern States, Montana had the highest death rate from tuberculosis. Most of the disease is found on the reservations, particularly among the young Indian children. In fact, the young Indian child is 10 times more likely to suffer from TB than is the young white child. The requested increase in the appropriation for program activities of the Division of Indian Health will help remedy this distressing situation.

Mr. Chairman, I ask permission to include, as part of my statement, a letter I received in support of the animal house at Hamilton, written May 13, 1958, by Mr. Robert J. Miller, chairman of the industrial relations committee of the Hamilton Chamber of Commerce.

Senator HILL. We will be happy to have that letter following your statement.

Senator MURRAY. Thank you, Mr. Chairman.

Senator HILL. I want to thank you, Senator. I might say that we had two Indians here from Arizona, a gentleman and a lady, and they made very strong statements sustaining your plea here today. We are certainly happy to have you here, sir.

Senator MURRAY. I know that these statements are true because I visited these Indian reservations in Montana, and I know a very bad situation exists out there. I certainly hope that we will carry out this program that we have.

Senator HILL. We certainly appreciate your apperance.

(The material referred to follows:)

HAMILTON CHAMBER OF COMMERCE,
HAMILTON, MONT., *May 13, 1958.*

Hon. JAMES E. MURRAY,
Room 111, Senate Office Building,
Washington, D. C.

DEAR SENATOR MURRAY: Pursuant to our recent contacts with respect to the Rocky Mountain Laboratory at Hamilton, Mont., we are writing this communication respectfully requesting that you file it on the occasion when you make your statement to the Senate Appropriations Committee.

The Rocky Mountain Laboratory has a long record of accomplishment in the study of infectious diseases. The practical control of Rocky Mountain spotted fever and tularemia is based upon research which was done in this laboratory.

For many years it was the only place where Rocky Mountain spotted fever vaccine was manufactured, and during World War II typhus vaccine and yellow fever vaccine were manufactured in the Hamilton laboratory. These vaccines were used in the civilian and military populations throughout the world.

Only recently, studies which were done at the laboratory resulted in clarifying the relation of the Salk vaccine to the outbreak of poliomyelitis which occurred in Idaho in 1955. A direct result of these studies was the discovery of a test which is used in safety testing the present poliomyelitis vaccine.

Many members of the staff of the laboratory were attached to the Armed Forces during World War II, and much of the credit for the control of insect-borne diseases in Africa and the South Pacific can be attributed to the professional qualifications of these men.

Through the efforts of members of the staff of the Rocky Mountain Laboratory, Q fever was recognized as a major cause of illness in California, its presence in dairy herds was established, and control of human illness was effected by elimination of the disease in dairy cattle.

There is great need for further studies of infectious agents. The general population suffers continually from minor illnesses caused by viruses, and industrial concerns consider these illnesses to be a major cause of absenteeism and of consequent economic loss. Studies directed toward control of these diseases would benefit all segments of the population. Many of the childhood diseases, such as mumps and measles, are not now under control, and studies to develop vaccines would be of much help. Many serious cases of mumps have occurred in the adult population in this community.

We are aware of the need for further research on allergic diseases. While a great deal has been accomplished in treating and diagnosing these illnesses, much more could be accomplished through basic research which might give us more information about the causes of allergy and the reasons why persons react to these causes.

If it is true that there appears to be some relation between cancer and filterable viruses, then there would seem to be an even greater need for studies of infectious agents and of immunity against these organisms. It is conceivable that sometime in the future specific vaccines may be developed against some organisms which cause cancer in man and animals.

We understand that there are 135 employees at the Rocky Mountain Laboratory at the present time. This actually represents a decrease in staff since the time yellow fever vaccine was produced at the laboratory. At that time there were 150 employees. We also understand that there is sufficient space available so that it would be possible, without expanding space, to increase the staff to this latter figure.

During the past few weeks there has been a flurry of activity which indicates there is a good possibility that an animal building will be constructed on the laboratory grounds. If this building is finished sometime during the next fiscal year, it would be possible to increase the staff to 170 or 175. If all the changes were made which could possibly be made at the laboratory by constructing a building to house garages, machine shop, etc., the staff might be increased by an additional 75 persons. This would represent space, equipment, and personnel which could be devoted to studies of infectious and allergic diseases. As pointed out in a previous letter, programs of considerable public health significance could be developed in Hamilton, and we are confident that the quality and caliber of research done here is equal to that which can be accomplished in highly urbanized areas.

Since the Rocky Moutain Laboratory has had a long experience in the prevention of infectious diseases and since there is need for further research, we feel that expansion of facilities at the laboratory would be of great value to the public health of the Nation.

Sincerely yours,

ROBERT J. MILLER.

Chairman, Industrial Relations Committee, Hamilton Chamber of Commerce.

STATE OF MONTANA,
STATE BOARD OF HEALTH,
Helena, Mont., May 16, 1958.

Hon. LISTER HILL,
United States Senate, Washington, D. C.

DEAR SENATOR HILL: It is my understanding that the Department of Health, Education, and Welfare 1959 appropriation is now being considered by your committee. In my capacity as chairman of the Indian Affairs Committee of the Association of State and territorial health officers, I would like to discuss two aspects of this appropriation and urge your committee's favorable consideration to more adequately meet these budget needs than was passed by the House.

Our concern is for the budget for the Division of Indian Health, specifically (1) for its general operation, and (2) for the implementation of Public Law 151 of the 85th Congress which has to do with the construction of joint use Indian community hospital beds in approximately 2 dozen localities in the United States.

The State and Territorial health officers, individually and through its committee on Indian affairs, has for many years been interested in the Indian health problem in this country. Under its former chairman, the able and outstanding health officer of the State of Minnesota, Dr. Albert Chesley, the association developed and supported the legislation enacted by Congress which resulted in placing of the Indian health problem in the United States Public Health Service.

Since the transfer to the Public Health Service, the association, through its committee, has continued its interest in this problem, meeting on numerous occasions both with and without the Public Health Service staff, to review progress and to offer suggestions and criticisms of the Public Health Service's operation, when deemed of value.

The committee appreciates and recognizes the additional funds which the Congress has made available to the Public Health Service to improve the Indian health in this country. It also believes that the Public Health Service has made substantial strides in improving Indian health. It recognizes that while this improvement may not be as great as some may have expected, it is aware of the existence of many difficult and unusual problems inherent in the transfer operation and the building of a sound basis for the long-term operation which the Indian health problem requires.

General Appropriation, Public Health Service, Division of Indian Health

The committee is concerned that this year for the fourth time the appropriation for the Division of Indian Health is essentially the same as in the last 3 years. At its last meeting the committee adopted the following resolution:

"Recognizing that over the past 3 years there has been no significant increase in the appropriation to the Division of Indian Health Services, in the face of increased costs, increased needs, and increased demands for service which have been well substantiated by the recent National Survey of Indian Health Needs, we believe that such an increase is overdue and recommend that the increase this year be at least $5 million, to a total of $45 million. It is further recommended that major emphasis in the use of these additional funds be directed toward making maximum use and further development of existing facilities and health services in the State and local areas."

Hospital Construction Appropriation, Public Health Service, Division of Indian Health

While the budget request of the Department of Health, Education, and Welfare for 1959 did not include provisions for funds to implement Public Law 85–151, the House of Representatives did provide $750,000 in the budget of the Division of Indian Health for this purpose. The Indian committee was concerned that no budget requests have been made by the Department and has been gratified to learn of the interest of the House of Representatives by its inclusion in the budget of funds which can initiate the implementation of this law.

The committee believes in implementing this law in a practicable and workable manner. While studies by the committee and by the Public Health Service have indicated that between five and six million dollars will be needed to eventually fully implement this law, a recent survey of the States concerned with it show the following:

Current joint-use beds and out-patient departments needed in the States after conference between the States and representatives of the Public Health Service

for those facilities that are under construction or can be under construction in fiscal year 1959:

State	Number Indian beds	Outpatient departments
California	15	1
Minnesota	37	0
Montana	30	1
New Mexico	35	2
Oregon	6	1
Wyoming	15	0

Estimated construction costs, $3,160,000 for 1959.

All of these projects would be part of community hospital projects developed with local and State funds and in some instances, Hill-Burton aid for the non-Indian portion of the project. Realizing the above amount to be substantially more than the $750,000 provided by the House of Representatives, the situation has been recently resurveyed in terms of those projects most likely to be under construction if Indian funds were made available during fiscal 1959.

Between $1,750,000 and $2 million is the minimum currently estimated as necessary during fiscal 1959 to bring under construction joint-use beds in community projects which will be dependent upon funds from this appropriation. It is earnestly hoped that your committee will be able to give further consideration to increasing this appropriation item in order that Public Law 85–151 may be implemented from the Federal standpoint as rapidly as localities in the States are able to construct the community portion of the joint use hospitals.

In some instances, failure to undertake the Federal portion of the project at the time of original construction will result in substantially higher cost for the final hospital, as well as for increased cost for the Federal share. In some instances, communities will be unable to delay construction of their portion because of time factors involved with the Hill-Burton construction grants.

I will be most happy to supply the committee with any additional information that they desire and is available to me. Thank you for your great interest in public health and your consideration of these two budget items.

Sincerely yours,

G. D. CARLYLE THOMPSON, M. D.,
Chairman, Indian Affairs Committee ASTHO.

Senator HILL. Senator, we certainly want to thank you for your statement this morning. It will be very helpful to those of us who seek to try to do the best we can to remedy this health situation among the Indians.

Senator MURRAY. Thank you, Mr. Chairman. I am always very pleased to come before your committee because you always give me such nice treatment here.

Senator HILL. Thank you, sir.

Senator Murray, I guess you have to go to another committee. We would be happy to have you stay with us.

Senator MURRAY. I will stay only for a little while because I have some people coming into my office.

Senator HILL. We have some very distinguished witnesses here this morning, and I think you would be interested, knowing your great interest in health. Come around and have a seat.

Neurology and Blindness

STATEMENT OF DR. H. HOUSTON MERRITT, PROFESSOR OF NEUROLOGY AT COLUMBIA UNIVERSITY; DIRECTOR, NEUROLOGICAL INSTITUTE, NEW YORK; PRESIDENT, AMERICAN NEUROLOGICAL ASSOCIATION; CHAIRMAN, PROGRAM PLANNING COMMITTEE, NATIONAL ADVISORY NEUROLOGICAL DISEASES AND BLINDNESS COUNCIL

General Statement

Senator Hill. Dr. Merritt, I would be happy if you would come around here. Our first witness will be Dr. H. Houston Merritt, professor of neurology at Columbia, director of Neurological Institute, New York; president, American Neurological Association; chairman of the program planning committee, National Advisory Neurological Diseases and Blindness Council.

Doctor, we want to welcome you here this morning. We appreciate your presence. We know you are a very busy man.

I understand that you will shortly be dean of the Columbia University Physicians and Surgeons Medical School. Is that correct, sir?

Dr. Merritt. Yes, sir.

Senator Hill. I congratulate you and congratulate the school.

Dr. Merritt. Thank you.

We certainly wish to thank you for allowing us to have the privilege to appear here. We are busy, but this is one of the most important activities of our career because we feel so very strongly about the work that the Public Health Service is doing. There is nothing that we can do that is enough to aid them in their work.

I have a prepared statement which I think the reporter has.

Senator Hill. We will have that appear in full in the record. Would you like to do that? Then you can summarize it for us. Say anything you see fit, Doctor.

Dr. Merritt. Thank you.

NATIONAL COMMITTEE FOR RESEARCH IN NEUROLOGICAL DISORDERS

I am appearing here today as spokesman for the National Committee for Research in Neurological Disorders, which is composed of two of our largest neurological societies and the voluntary health organizations interested in the field of neurological diseases.

You are familiar with these, and I will not need to enumerate them to you.

I might add that I am on the medical advisory board of practically all of these associations and know the work they are doing and how much they rely on the work that is being done by the Public Health Service.

This committee which I represent annually prepares a budget which is the citizens' budget reflecting the medical community's needs for the coming year.

I have a copy of the budget which I would like to have put in the record.

Senator HILL. We would like to have that for the record, Doctor, by all means.

CEREBRAL VASCULAR DISEASE

Dr. MERRITT. We are here to tell you a little bit about this budget and how we think the research it provides should go forward in the field of nervous diseases as promoted by the United States Public Health Service and the National Institute of Neurological Diseases and Blindness.

I would like first to say a few words about cerebral vascular disease. This is one of the most common diseases that afflicts mankind and it ranks third in the list of the killing diseases.

Senator HILL. Ranks third?

Dr. MERRITT. Yes.

It ranks very high as a cause of crippling in adults. It is estimated that about a million people are totally or partially disabled because of cerebral vascular disease and as a result of strokes, which is the main manifestation of cerebral vascular disease in the middle-age group.

In the old-age groups we have failing of mental powers as a result of cerebral vascular disease. This disease may strike at any age, but it is most common in middle life and late life.

In the year 1955, there were 39,000 deaths in the working-age group, that is, in the age group from 30 to 60.

In spite of the magnitude of this problem there has been very little work done on the subject. What work has been done has been scattered and sporadic. It is our recommendation that a concentrated program, a crash program in cerebral vascular disease and strokes be initiated by the National Institute of Neurological Diseases and Blindness.

CLASSIFICATION OF RESULTANT DISEASES

One of the first steps that has been taken is the effort to establish a classification of these diseases in order that we can know what kind of treatment should be given.

The types of diseases that result from cerebral arterial sclerosis are three. There may be a vessel lesion and a thickening of the walls or a formation of a blood clot which we call a thrombosis. Then the part of the brain that is supplied by this vessel dies. That is perhaps the most common type of lesion.

The next most common is a clot somewhere in the rest of the body from the heart or lungs that gets into the circulation and plugs up a blood vessel and produces exactly the same results, softening of the brain in the area supplied by that vessel. We call that embolism.

The third type is where the blood vessel wall weakens, breaks and the blood goes into the tissues. We call that cerebral hemorrhage.

It is very important to try to be able to distinguish among these three. We recently had a committee under the chairmanship of Dr. Clark Millikan make a thorough study of all that is known about diagnosis and classification. A manual has been printed which will be circulated to all the neurologists in the country. It will be given to the neurologists to give to their schools.

METHODS OF ATTACK ON DISEASE

It is of great importance to differentiate these types of lesions in order to know what kind of treatment to apply. We have several lines of attack now that we did not have before.

One of them is the use of anticoagulants. If you can prevent blood from clotting, then you may prevent a stroke occurring.

We have a number of patients who have little tiny strokes in which a paralysis will last for an hour or two, and then it will occur again in a few days or a few weeks. We find if we give them anticoagulants, these things stop.

We need much more study of the effect of anticoagulants on cerebral arteriosclerosis in patients who have had a single stroke or patients who are in danger of strokes.

Senator HILL. Doctor, may I ask you a question there? Of course, we have heard much about anticoagulants for many years now. What is the chemical composition of most of these anticoagulants? What are they?

Dr. MERRITT. Most of them are something that interferes with the blood-clotting mechanism. One that is used is called heparin. I do not know precisely what the chemical composition is.

The one that is used most commonly on a long-term basis is dicumarol, which is derived from a grass.

Senator HILL. From a grass?

DISCOVERY OF DICUMAROL

Dr. MERRITT. It is very interesting how this was discovered. The cattle, I think, in Wisconsin were eating grass and were bleeding because their blood-clotting mechanisms were interfered with. If they got an abrasion they would start bleeding. The scientists I think at the University of Wisconsin, studied and found that the grass contained dicumarol which is effective in preventing the blood from clotting.

Of course, to give it to cattle wasn't good because they didn't need it, but to give it to human beings who have arteriosclerosis is quite important. So here was something in the field of animal health that has been applied to human health, just as many things that are effective in human health are applied to animals.

NEED FOR TESTING PROGRAM

We think there ought to be a large program started in the various research hospitals in this country and in some of our large chronic hospitals like the State institutions with a large number of elderly patients where we can test the value of anticoagulants in preventing the strokes.

There is another development which has not yet reached the point of practical application. Enzymes have been discovered which can dissolve a blood clot. If blood clots in a vessel, the enzyme is directed to the vessel, and it will dissolve the clot and then blood can go through. If that is perfected, and if we get the patient the minute he has the stroke or within a short while afterward and give him this enzyme, we will be able to prevent the disastrous results that occur from plugging of vessels.

That has to be pursued to its ultimate end because it offers salvation for those who have already had a clot.

REFRIGERATION OF PATIENTS

The third recent discovery is the use of cooling or refrigeration of patients with vascular lesions, to cut down the need for blood so perhaps the amount that is there will be sufficient until the crisis is over.

Senator HILL. Excuse me, Doctor. This is Senator Thye, of Minnesota. Dr. Merritt, Dr. Clifford, Senator Thye.

Senator THYE. I am awfully sorry for the interruption.

Dr. MERRITT. We were just talking about some of the new methods of study in treating patients who have cerebral vascular accidents or strokes, which is one of the greatest problems in our field of neurology.

The third thing I was talking about was cooling the patient, cutting down the need of the brain for blood until the crisis is over. This is also used in operating on patients for malformations of the blood vessels of the brain which we call aneurysms. These aneurysms are very apt to rupture and cause paralysis or sudden death.

Senator HILL. Somewhat like a bad place in an automobile tire.

Dr. MERRITT. Just like something that sticks out on the side of your tire. We do not see those much now today but we can remember in the old days you did see them stick out.

Senator HILL. If we could make the same progress with the blood vessels that our friends have made with rubber tires, it would be some advance, would it not?

Dr. MERRITT. Some advance.

They find that if they cool the patient with refrigeration they can operate on these malformations and remove them much more easily than they could if the patient were allowed a normal temperature because the circulation is down. That has been a very great advance.

We now have going a collaborative study on the treatment of these aneurysms by both medical and surgical methods. Many of the centers are treating their patients with this new method of hypothemia or refrigeration.

NEED FOR STUDY OF ANEURYSMS

We feel that this study of aneurysms should continue and that we should speed up the program in the study of strokes. We feel that a million dollars extra is needed in addition to the budget that was originally submitted. The budget recommendation originally submitted was $29 million.

We find now that there are chances of expanding the program on cerebral vascular disease, and we are asking that a million dollars more be appropriated for this study.

Senator HILL. And that study would be continued under the committee to which you referred.

Dr. MERRITT. Yes, sir.

Senator HILL. Whom did you say was head of that committee, Doctor?

Dr. MERRITT. Dr. Clark Millikan was the head of the committee that prepared the classification. Dr. Sahs is head of the committee that is studying aneurysms. One of those two or perhaps some others will be the head of this new study on strokes.

There is a whole group that is very much interested in this matter, and we will discuss this at length later.

EPIDEMIOLOGICAL STUDIES

The second thing I would like to speak of is epidemiological studies. There has been very little information with regard to the distribution of certain of the diseases. We do know that certain diseases, for instance multiple sclerosis, are far more common in temperate and cold climates than it is in warm climates. The incidence in Canada and the Northern States, going right straight north, is quite high; whereas, the incidence in the Southern States is quite low.

It is the same way when you get into South America.

The incidence in the northern part of South America is low, but when you get down below the equator, it comes back up again.

There is some difference in the incidence in different parts of a certain region. There should be a clue from this as to causation. This is true not only of multiple sclerosis, but it is true of a great many other diseases. We do not know enough about that now, however, to draw any conclusions that will help us.

Such things as temperature, climate, mineral content of soil, diet, and other such things have to be studied in order to reach conclusions that will help us get at the cause and prevention of disease.

We feel that a great many of these diseases are due to metabolic disturbance. Whether it is due to a lack in the diet or to something present in the diet that shouldn't be there, we do not know.

For instance, there is a disease that was reported recently in Japan where the patients have severe involvement of the nervous system. It was found that this occurred only in the inhabitants who ate a certain type of fish. This fish had some kind of poison which acted as a toxin. They thought that the poisoning probably came from the waste products of plants along the way.

We also know that in certain fox farms where they were raising foxes for furs, that if the foxes ate this type of fish they would get a disease which in man is called Wernicke's disease. That is a degeneration of the base of the brain that is fatal.

They found that if they cooked the fish this did not happen. So there was something in the raw fish that inhibited the action of vitamin B.

Senator HILL. You mean sterilized the patient?

Dr. MERRITT. Yes, sterilized. It interfered with vitamin B.

There are many other diseases that have geographical distributions and features that we ought to learn about. We are recommending that the Institute start a program embracing this type of study. Something has already been done. Last year at the International Congress of Neurological Sciences in Brussels there was a meeting of men from all parts of the world who were interested in this. They had a special meeting on epidemiology and geomedical survey.

There is great interest in this, and we feel that it should be pursued further. We are recommending an increase in the budget of a million dollars to take care of it.

STUDIES IN NEW DRUGS

The third recommendation we wish to make is an increase in the budget in order to undertake studies of new drugs.

Senator HILL. When you speak about an additional million dollars, was that in your national committee budget or was that in addition to the $29 million?

Dr. MERRITT. It is in addition to the $29 million.

Senator HILL. I see.

Dr. MERRITT. We feel that the time is ripe for a concentrated study on drugs that affect the central nervous system, not only from physiological viewpoints but from a therapeutic viewpoint.

One of the main diseases that affects over a million people, probably a million and a quarter, is epilepsy. There are a great many drugs being introduced for the treatment of this disease. They are not being properly evaluated. One investigator will report that a drug is wonderful and another will say it is not good. The practicing doctors are greatly confused.

We feel that a concentrated program should be initiated in the study of drugs that affect the nervous system. Epilepsy is only one example. Another is myasthenia gravis.

There are other drugs that act directly on the neuromuscular junction and also drugs that act on brain tumors.

So we feel that a program should be started where groups studying drugs in various clinics will get together and unify their standards of diagnosis, unify their standards of treatment, and work with the drug producers in studying the effects of new drugs and trying to develop new drugs that will help patients with neurological diseases.

We think that the time is ripe for this and we ought to go ahead immediately.

This ends my formal statement, but I would be happy to answer any questions. I thank you very much for the privilege of being present.

Senator HILL. Any questions, gentlemen?

Senator THYE. I have no questions, but I would like to say that Dr. Merritt's statement has been a most informative one.

Senator POTTER. I have no questions, Mr. Chairman.

Senator HILL. That was a very fine, interesting statement, Doctor. I must commend you. You made it so specific and so definite and so clear as to just the need for the additional funds and just what you would do with these funds if you received them.

Dr. MERRITT. Thank you, sir.

Senator HILL. It was a most informative statement.

(The statement referred to follows:)

NATIONAL INSTITUTE OF NEUROLOGICAL DISEASES AND BLINDNESS

STATEMENT OF DR. H. HOUSTON MERRITT

Mr. Chairman and members of the committee, I am H. Houston Merritt, professor of neurology at Columbia University, director of the New York Neurological Institute, and chairman of the program planning committee of the National Advisory Neurological Diseases and Blindness Council.

I am here today as a spokesman for the National Committee for Research in Neurological Disorders, which is composed of two of our largest neurological societies and a number of lay organizations interested in the health field.

These are: National Epilepsy League, Inc., United Cerebral Palsy Associations, National Multiple Sclerosis Society, Muscular Dystrophy Associations of America, Inc., National Society for Crippled Children and Adults, Inc., National Foundation for Infantile Paralysis, Association for the Aid of Crippled Children, National Association for Retarded Children, American Academy of Neurology, and American Neurological Association.

As you know, the national committee each year studies carefully the research and training needs of the National Institute of Neurological Diseases and Blindness and develops a citizens budget which it believes reflects accurately the requirements of the Institute for the coming fiscal year.

I have here copies of the budget which our committee prepared last fall. Since then, however, a number of new opportunities have arisen which I believe we should not overlook at this time.

First, I would like to speak about some of the advances in research in cerebrovascular disease. Cerebrovascular disease, more commonly known as stroke is a major unsolved medical problem. It ranks third among all diseases as a killer and first as an adult crippler.

It is estimated that over 1 million Americans today are disabled because of this condition. In 1955, over 175,000 persons in the United States died as a result of this disease.

Although cerebrovascular death or disability can strike at any age, it is more common past middle age. Of the cerebrovascular deaths in 1955, 39,600 were in the working age group, the 25-to-64 year group.

In spite of its scope as a public health problem, there is a great void in our knowledge of the subject. The research which has been done in this field, until recently, has been sporadic and scattered.

Strokes, which are the most serious manifestation of cerebrovascular disease, may result from any interference with the circulation within a blood vessel of the brain. Such interference may result from occlusion of a blood vessel by arteriosclerosis, by plugging of the vessel by a circulating blood clot, or by rupture of the vessel wall as a result of malformation or disease.

The neurologist who is called upon to diagnose and treat the patient who has experienced such a catastrophy may find it difficult to be certain which of these processes is responsible for the damage. However, if treatment methods are to be accurately evaluated, a method of describing and categorizing all such patients is necessary.

In June 1955, the National Advisory Neurological Diseases and Blindness Council appointed a committee under the chairmanship of Dr. Clark H. Millikan, of the Mayo Clinic, to attack this problem. This committee has now completed a manual for the classification of cerebral vascular disease.

In the last 3 years, four major breakthroughs have occurred which indicate that the time is ripe for the development of a crash program directed against the tragic consequences of strokes. These new breakthroughs comprise (1) The promise for the development of effective anticoagulants for the prevention of strokes due to lodging of blood clots in the vessels of the brain (2) the development of an enzyme which promises to dissolve blood clots in the brain once they are formed, (3) the discovery of a method for cooling the brain (hypothermia), which makes the surgical treatment of malformations of the blood vessels (aneurysms) of the brain amenable to surgical treatment, and (4) the experimental induction of strokes in animals which permits the testing of methods of treatment and prevention in the laboratory, which, later, might be applied to humans.

The Institute already has begun to pursue these leads. It has initiated cooperative studies on the use of anticoagulants for the prevention of strokes in humans, on the use of hypothermia in surgery, and the treatment of vascular malformations (aneurysms). It has several extramural projects on strokes in animals and one similar project in Bethesda.

Regarding the collaborative project on the use of anticoagulants to retard or prevent strokes, there are now five collaborating medical centers in this program and many more wish to join. It should be noted that this program is designed chiefly for acute types of strokes. However, the final testing ground should be in large State hospitals which house thousands of patients with chronic vascular disease of the brain. Representatives from some of these hospitals having adequate facilities have visited the Institute expressing an interest in participating in the anticoagulant cooperative project. To include these institutions and speed up the whole program on a crash basis would require an increase of at least $1 million in fiscal year 1959.

The Institute's current cooperative studies on the surgical treatment of aneurysms include 17 medical centers at a cost of $309,000. This total should be increased to one-half million dollars.

There is a definite need at the present time to make a worldwide epidemiological survey to obtain more reliable data relative to the geomedical features of disorders of the nervous system, particularly since so many of these diseases have an unknown cause. The possibility of solution would be greatly enhanced if their incidence could be studied on a worldwide basis in order that environmental and genetic conditions could be considered.

Epidemiological studies have been made here and in Canada and have included such factors as climate, mineral content of water and food, normal background radiation, and other items. However, since variation in climate, diet, and economic conditions is somewhat limited, the studies would be much more productive if we were able to compare the incidence of certain disorders in this country with other parts of the world.

As an example of geographic distribution of disease, intensive comparative studies on the distribution of multiple sclerosis in North America have shown the incidence to be six times as high in the northern or colder parts of the United States and Canada as in the southern part of this country.

At the present time, surveys are also being made to determine the effect of climate and geography on the prognosis or outcome of multiple sclerosis and other diseases.

When we look back historically, we are reminded that the solution to a number of diseases has been hastened by epidemiological studies. The mode of spread of yellow fever was clarified when the association of the geographic distribution of the disease and of the aedes mosquito was demonstrated.

Another illustration of the use of comparative population surveys is that of the classic investigation of pallegra—a disease which is no longer a serious problem in the United States.

It is fortunate at this time that a structure is being established through which a worldwide epidemiological program could be organized and implemented. A new World Federation of Neurology was organized last summer in Brussels. Its principal objective is to serve as a formal representative body for the advancement of neurology throughout the world. This organization could be instrumental in strengthening and coordinating all the advances which are being made in neurology around the world.

A committee of this Federation has recently been formed as a result of a geomedical conference sponsored by the National Institute of Neurological Diseases and Blindness last summer. A small working subcommittee will meet this summer to lay the groundwork for international cooperation. Their first requirement is the establishment of standard methods of case reporting, diagnosing, and statistical handling of epidemiological data. On this committee are representatives from India, Japan, South Africa, the Middle East, Western Europe, and the United States.

Some epidemiological work in other countries can be done through direct grants from the National Institute of Neurological Diseases and Blindness. However, if a worldwide survey is to be made, it would be possible to interest scientists from many more countries and for them to assume much more responsibility with the project if the National Institute of Neurological Diseases and Blindness were to make a grant to the new World Federation of Neurology. This organization would then locate the scientists around the world and make individual grants to them. Some of the answers these scientists would be seeking would be these: What is the relation of Parkinsonism to encephalitides? How do diet and climate relate to multiple sclerosis? Does the incidence of cerebral palsy and mental retardation in other parts of the world differ, and if so, why?

In some areas of the world, unusual disease situations develop, which if studied might have some direct answers for diseases for which we are seeking answers. Examples of these are "kuru" in Australia and New Guinea, "miniamata" disease in Japan, and the high incidence of amyotrophic lateral sclerosis in Guam. We know that "miniamata" is highly fatal, resembles some of the degenerative neurological diseases we know, and is currently believed to be caused by a diet of fish affected by industrial waste. Although at the present time these diseases are far from our shores, experience with diseases of clearly infectious origin emphasizes the global nature of health problems.

A worldwide study would also establish certain monitoring arrangements to prepare us for epidemics such as our recent experience with Asian flu. A survey

into a number of currently unanswered problems on a worldwide basis would require a budget of about $1 million.

Another urgent need at the present time is a comprehensive plan for the development and testing of new and potent drugs which act on the central nervous system. For example, epilepsy is a condition affecting 1 out of every 200 persons. During the past 10 years, drugs useful in controlling seizures have increased threefold and new drugs are constantly being produced. It is of utmost importance that these be tested and evaluated. Yet, at the present time, the procedure for testing them is entirely haphazard, depending upon the whim or interest of some individual investigator or an informal affiliation which he may have established with the pharmaceutical company.

I believe that a comprehensive plan should be developed at once for the evaluation and testing of these drugs to determine their effect on the nervous system. It is absolutely essential that human clinical testing be carried out to determine the potential areas of usefulness of each new drug.

I propose that a committee of eminent scientists and teams of investigators be established with the responsibility of reviewing all newly developed agents. The group of experts would keep themselves up to date on new drugs, and would be available to discuss and advise on any possible application and potential effectiveness. The teams of investigators would provide a total national facility for the investigation of all new neurologically active drugs. Considering all the new drugs being developed and the scope of such a program, I recommend that $1 million be earmarked for this project.

These three programs which I have spoken about in some detail, I believe, offer unusual new opportunities to us and would justify the additional appropriation we are recommending.

Thank you.

National committee budget, fiscal year 1959*

I. Research (extramural):	
1. Research projects	$12, 000, 000
2. Field investigations	5, 250, 000
Total	17, 250, 000
II. Training:	
1. Training grants	4, 000, 000
2. Traineeships	2, 000, 000
3. Fellowships	550, 000
Total	6, 550, 000
III. Review and approval	475, 000
IV. Direct research	5, 164, 000
Training	51, 000
Administration	260, 000
Total	5, 475, 000
Total	29, 750, 000
*Since the original approval of this budget by the national committee, significant program developments, including a worldwide epidemiological study, and the testing of drugs effecting the central nervous system now cause us to recommend an additional $2 million increase for field investigations under the extramural research program, and $500,000 for direct research of the Institute, to provide central coordination and laboratory services for these and other field investigations	2, 500, 000
	32, 250, 000

National Institute of Neurological Diseases and Blindness, fiscal year 1958

I. Research (extramural):	
1. Research projects	$7,750,000
2. Field investigations	3,000,000
Total	10,750,000
II. Training:	
1. Training grants	3,975,000
2. Traineeships	1,000,000
3. Fellowships	525,000
Total	5,500,000
III. Review and approval	383,000
IV. Direct research	4,460,000
Training	51,000
Administration	243,000
Total	4,754,000
Grand total	21,387,000

Senator HILL. Dr. Clifford.

Our next witness is Dr. Stewart H. Clifford, assistant clinical professor of pediatrics, Harvard Medical School.

WORK IN PEDIATRICS

STATEMENT OF DR. STEWART H. CLIFFORD, ASSISTANT CLINICAL PROFESSOR OF PEDIATRICS, HARVARD MEDICAL SCHOOL; PEDIATRICIAN, BOSTON LYING-IN HOSPITAL; CHIEF, NEWBORN SERVICE AT CHILDREN'S MEDICAL CENTER, BOSTON, MASS.

GENERAL STATEMENT

Dr. CLIFFORD. I am Stewart H. Clifford, assistant clinical professor of pediatrics at Harvard Medical School, pediatrician in chief of the Boston Lying-in Hospital, and chief of the newborn service at the Boston Children's Medical Center.

For the past 30 pears I have been engaged in active practice and, at the same time, I have been in charge of Boston Lying-in newborn service, with my job and responsibility being patient care, teaching, and also clinical research.

In this time, the experience from 150,000 births that have taken place has given me a very clear picture of some of the major problems of the perinatal period and forms the basis of my present activities.

I also have a prepared statement, Senator, which I would like to have included in the record, if that is permissible.

Senator HILL. All right, we will put it in in full, Doctor, and then be happy to have you make any additional statements you see fit, summarize in any way, sir.

Dr. CLIFFORD. Thank you very much.

LITTLE PROGRESS IN NATAL DEATH RATE

In spite of all the advances that have taken place in modern medicine in three decades, the mortality rate for the prematurely born

baby in the period from birth through the first 28 days after birth has remained almost static.

Dr. Herman Bundesen, the well-known commissioner of health of Chicago, made a statement that is entirely true; namely, that in the past 40 years there has been no reduction in natal-day deaths. That is, the deaths of full-term and premature babies that take place within the first 24 hours after they are born.

Senator HILL. In other words, in 40 years, we have made no progress.

Dr. CLIFFORD. That is correct, in the natal-day death rate.

Senator HILL. We have moved into the guided missiles and the space age, but we have made no progress in 40 years in this?

Dr. CLIFFORD. That is true, sir.

In the babies who survive that first 24-hour period, we have made progress. In the past 40 years, the newborn mortality for all babies, premature and full term, has dropped from 36 in every thousand that were born 30 years ago who died to a level now of 18 in the country as a whole. That is cutting it in half for the babies as a group.

In the private hospitals, in our own for instance, there have been even better results. The fall in our institution has gone from 23, 30 years ago, to 13 per thousand now.

To give you an idea of the distribution of the 13 babies that we are now losing in every thousand births, 11 of the 13 are prematures, weighing under 5½ pounds and 2 are full term. So the outlook as far as living is concerned has been improved greatly for the full-term baby.

Practically all of the improvement that has taken place, as you can see, has been in the full-term infants.

NECESSITY FOR FURTHER RESEARCH

One of the reasons for the lack of advance has been that we have concentrated on equipment and training for the care of the baby the moment he is born. As I intimated, there being no reduction in deaths in the first 24 hours, the things that we have—the most expensive equipment, the finest personnel in the world—are not capable of doing anything to save the baby that you lose within minutes or an hour after it is born.

We are all convinced that improvement in mortality and morbidity, which is also important, is going to result from the extension of our knowledge, as you intimated, back into the period when the baby is being carried inside the mother's uterus, because the factors that are operating to cause the death of the baby a minute before he is born and have him called a stillbirth, are the same factors that are operating to have him die 2 minutes after he is born.

Until you find out what is injuring the baby inside the mother's womb or uterus, you are not going to affect the baby after he is delivered.

SERIOUSNESS OF PERINATAL MORTALITY

So this science or new approach is called perinatal mortality, which includes from the time of viability, or 20 weeks of life by legal definition of pregnancy, on through the first month of life.

To come back to the first four causes of death in the United States, as Dr. Merritt mentioned, heart disease leads the way, cancer is next,

and the cerebral vascular diseases are third. Perinatal mortality is fourth in the major causes of death.

Senator HILL. The very thing we have made no progress in, in 40 years is fourth?

Dr. CLIFFORD. Is fourth.

Senator POTTER. What is the cause? Is it because the baby is not fully developed? What can be done about it?

Dr. CLIFFORD. I am going to try to develop that point as we proceed, and if you have any questions, I will be glad to take them up specifically.

Senator POTTER. All right.

Senator THYE. I note here your reference to a diabetic condition of the mothers.

Dr. CLIFFORD. Yes, sir.

Senator THYE. Have you made any extensive studies as to that?

Dr. CLIFFORD. Yes, we have, Senator.

Senator THYE. Will you touch on that later in your statement?

Dr. CLIFFORD. Yes I will, sir.

Senator THYE. Then I shall not pursue the question any further.

Senator HILL. Go ahead.

MATERIAL CONDITIONS INFLUENCING CHILD

Dr. CLIFFORD. This really has a bearing on both of your questions: the conditions that influence both favorably and unfavorably the developing baby inside the mother's uterus are very poorly understood even today. Likewise, the ultimate influence of the multitude of factors that surround the actual labor of the mother and the birth process and actual delivery of the baby have not been studied in any long-term fashion to know the effect of these various factors on the ultimate development, mentally and physically, of the child.

There are a number of conditions such as cerebral palsy, mental retardation, congenital cataracts, blindness of other types, congenital deafness, which appear to be related to factors operating through the pregnancy on the fetus inside the mother's uterus.

However, in any one hospital, the occurrence of cerebral palsy, for instance, in the patients that we are delivering at our hospital is fortunately so rare that over a year you might run into only 1 or 2. There are so few that for one observer in one hospital to attempt to study the factors surrounding the causes and prevention and treatment, and come to definitive conclusions, is impossible.

So that while in our particular hospital the incidence of each of these specific things I have mentioned is low, when you consider that the birthrate is going up—we have over 4 million babies in the United States each year—the accumulated total of these conditions of small incidence in each institution constitute a major health problem today in their entirety and are a tremendous responsibility to all of us.

HIGH RATE OF NEUROLOGICAL DISEASES IN CHILDREN

So that recently we had another example of the importance of these neurologically damaged patients at the hospital at the University of Minnesota. Dr. McKelvey and Dr. John Anderson told me that the incidence of neurological diseases today in the children being admitted

to the children's services at the hospital is 30 percent. At the Massachusetts General Hospital an independent survey by Dr. Philip Dodge came up with the same figure, 30 percent of the children admitted to the pediatric services are suffering from neurological conditions, about a third of the admissions.

Because of this situation, and to explore and search for leads that might help us to understand the cause, prevention, and treatment of these conditions, the National Institute of Neurological Diseases and Blindness organized a collaborative project to study factors in the perinatal period and their influence on the origin of cerebral palsy, mental retardation, and other neurological conditions that I mentioned.

LARGE CHILDREN'S GROUPS NECESSARY FOR STUDY

Because of the low incidence of these conditions in each hospital, we have been informed by our national statistical committee—and their results are in keeping with our own experience—that to get a large enough group of babies on which to make valid conclusions about each of these individual problems, it will take a total of 5 years and 40,000 cases; 40,000 babies will have to be studied and be studied very, very carefully.

At the present time, as a result of this project that Congress has supported, the National Institute of Neurological Diseases and Blindness has enlisted 12 collaborating institutions.

COOPERATING INSTITUTIONS

I would like to submit the list of these institutions for your information.

Senator HILL. We will be happy to have those, Doctor.

Institutions	Number of cases per year	Total for 5 years
Boston Lying-In Hospital and the Childrens Medical Center, Boston, Mass	1,000	5,000
Brown University, Providence, R. I	500	2,500
Charity Hospital, New Orleans, La	500	2,500
Philadelphia Hospital and the Childrens Hospital of Philadelphia, Philadelphia, Pa	500	2,500
Childrens Hospital, San Francisco, Calif	500	2,500
Columbia Presbyterian Medical Center, New York, N. Y	500	2,500
Johns Hopkins Hospital, Baltimore, Md	500	2,500
Medical College of Virginia, Richmond, Va	500	2,500
New York Medical College, New York, N. Y	500	2,500
University of Minnesota, Minneapolis, Minn	500	2,500
University of Oregon, Portland, Oreg	500	2,500
Yale University School of Medicine, New Haven, Conn	300	1,500
Total	6,300	31,500

I think a survey of the named institutions that are dedicating themselves to this study and their reputation is probably one of the greatest endorsements of this program that one could ask for. They are a very representative cross section of hospitals throughout the country. But at the present time these 12 groups will contribute only 31,500 infants. To accomplish our 5-year goal, we estimate we need 3 additional hospitals to come in, each giving to the group about 500 patients a year to give us the total of 40,000 that is the irreducible minimum to make this study effective.

Senator THYE. Doctor, may I interrupt?

Dr. CLIFFORD. Yes, sir.

Senator THYE. How long will the study require, how many years?

Dr. CLIFFORD. It calls for a 5-year study. It starts with the mother when she first becomes pregnant, and with detailed studies all through the time of carrying the baby, and all of the factors that have a bearing on the child, medical, social, economic, and psychological. It takes it through delivery and on through the first 5 years of life.

METHOD OF SELECTING MOTHERS

Senator THYE. How will you select the mothers?

Dr. CLIFFORD. The mothers are selected so there is not bias. It is done according to a master plan as worked out at the Institute in Bethesda. We take every third patient that comes along.

Senator THYE. You mean in all the institutions?

Dr. CLIFFORD. It varies. Tulane delivers 16,000 a year. Their ratio will be 1 in 8 or 10.

You do not have bias in the selection.

It is also of interest that we did not know how these mothers would accept being invited to become part of the study. The acceptance is very, very high. They are most enthusiastic about it even though they know it will mean more visits for them because they also know it means better care for their babies and a better chance for them.

Senator THYE. Then it is what you call the lying-in hospitals?

Dr. CLIFFORD. Yes, they are maternity hospitals.

Senator THYE. Minnesota, Oregon, Yale University of Medicine?

Dr. CLIFFORD. That is the New Haven Maternity Hospital.

Senator THYE. Thank you.

INCREASED BUDGET NEEDED

Dr. CLIFFORD. In order to accomplish this, we feel that an increase in the budget of $1,250,000 will be required to make this project fully effective.

Senator POTTER. That is to add three additional hospitals?

Dr. CLIFFORD. No, of this $1,250,000, $750,000 is needed to provide the three additional hospitals. This additional $500,000, I would like to emphasize, is extremely important. It is really the key to this complicated collaborative study. It is a request for $500,000 to increase the intramural funds for the National Institute of Neurological Diseases and Blindness at Bethesda; to set up the central organization to correlate the multitude of findings that are coming in.

For instance, from just the perinatal study, that is the study of the mother from the time she becomes pregnant until the time she delivers, we have estimated that there are 4,000 specific items of information on one patient. This record all goes to the Neurological Institute in Bethesda. It has to be correlated by the master brain idea machine, and it takes a central organization of tremendous strength in order to bring all of these institutions from various parts of the country under central control.

Furthermore, this study is a pilot study that may be used elsewhere. It may be used by other studies in the future.

NEED FOR CENTRAL COORDINATING AGENCY

In the performance of this it is obvious that Minnesota, for instance, has to deliver the exact same type of information to the central study as Boston or Chicago or any other part of the country does.

We have to have the same definitions, the same controls maintained by a central organization that sees that the material coming from one institution is the same that is coming from another.

I cannot emphasize too strongly the need of the Neurological Institute in Bethesda in having a central coordinating group.

Senator POTTER. In other words, the information you receive from the hospitals would do little good unless you had the personnel to correlate it and bring it together so it is meaningful.

Dr. CLIFFORD. That is right.

Senator HILL. Doctor, you estimated the need for this study for the coming fiscal year to be $1,250,000.

Dr. CLIFFORD. Yes; divided into $750,000 to the project itself, and $500,000 for the intramural central controlling group at Bethesda.

HOUSE REPORT

Senator HILL. The one reason I asked that question is that the House committee report said:

> One such area of study sitmulated by the National Institute of Neurological Diseases and Blindness relates to diseases and disorders arising from the time of conception to 24 hours after birth, or the so-called perinatal period. It is becoming clear that many more infant deaths, congenital malformations, and other defects than had been suspected are the result of conditions affecting the mother during pregnancy.
>
> A national program of research on this problem involving close collaborative research among 12 institutions which deliver 32,500 babies per year is now in progress. The original plan called for a program involving 46,000 deliveries per year in 15 institutions. The additional funds provided for this Institute are intended in part to enable this important research to reach the level originally planned.

The House put in over the budget estimate $1,250,000. I am wondering why they said, "The additional funds provided for this Institute are intended in part to enable this important research to reach the level originally planned"?

It will take the whole $1,250,000, as I understand it, to carry forward the program according to the master plan as originally contemplated, is that right?

Dr. CLIFFORD. Yes, sir.

Senator HILL. All right. Thank you, sir.

Do you have any comment to make on that?

REEMPHASIS ON CENTRAL CONTROL

Dr. CLIFFORD. I do not think we made it clear, and that is why I have emphasized it so this time. The additional $500,000 that is going to be required for this intramural central control is important. We need $750,000 to enlist the three additional institutions to give us our total load, but we have not emphasized the need for the $500,000 for control, the central coordination of the project.

Senator HILL. Here at the Institute?

Dr. CLIFFORD. Here at the Institute.

Senator HILL. Fine, thank you, Doctor.

I just wanted to make that clear for the record.

Dr. CLIFFORD. As I say, I had been in practice up to the first of January, and I became so excited at the prospects and potential in this study that I gave up my practice and went in the direction of our prenatal project on a full-time basis.

Although we have been in operation less than a year, you might be interested in information from one institution on some of the advances that have come about with less than a year's concentration on this problem.

Senator HILL. Excuse me one minute, Doctor. The House report stated:

"The original plan called for a program involving 46,000 deliveries per year in 15 institutions."

Dr. CLIFFORD. That is an error, sir.

Senator HILL. That is what I want to make clear. That is 46,000 deliveries over the 5-year period, is that not right?

Mr. MERRITT. Forty thousand.

Senator HILL. Instead of 46,000, it ought to be 40,000 over the period of 5 years, just as Dr. Merritt states?

Dr. CLIFFORD. Yes. A 5-year total of 40,000 cases. At least three additional institutions should be added. Forty thousand deliveries over a 5-year period.

Before the House I gave those same figures of 40,000, sir.

Senator HILL. That is just an error made in the report.

Dr. CLIFFORD. It is stated as 40,000 in the testimony before the House.

DIABETIC MOTHERS

To go to your question about the diabetic mothers, about 5 years ago we were able to receive all of the diabetic mothers that Dr. Elliott Joslin had in his clinic. Dr. Joslin, because of his reputation, has accumlated a tremendous service of very severe diabetic girls who were diabetic as small children, have gone on and matured and are married and having children. They come to him from all over the United States.

We will run nearly 200 girls a year in this one service who were real juvenile diabetics. This is important because they have learned how to control the sugar in diabetes, and so forth, but the girls who have not age very rapidly. After 21 they may have arteriosclerosis, or kidney disease, or eye trouble. They are really in a pretty serious medical condition.

Up until insulin came along, none of them had any babies.

If I can digress for a second, Dr. Joslin is very well known. When I was a medical student, and this was 30 years ago, just at the time that Banting and Best discovered insulin—Banting and Best from Toronto were very close friends of Dr. Joslin—then we had some of the first insulin to give to patients in the Boston area.

Dr. Joslin had a patient by the name of George Baker, whom you will remember, I am sure, who was in for a surgical operation of some type. Dr. Joslin walked in one morning and said, "Mr. Baker, I have to show you something that nobody else in this world has ever seen." He had in his arms a brandnew baby.

He said, "This is the first baby that was ever born of a mother who had diabetes as a child."

This was only possible because of insulin.

Out of this dramatic incident, Mr. Baker gave millions of dollars for the Baker Memorial, the Deaconess Hospital, and that is how it started.

Because of this interest, Dr. Joslin has attracted all these people. So we have a tremendous concentration of very severe diabetics, and they are a part of our collaborative study.

EFFECT OF PARENTAL DIABETES

We have found that one of the things that damages the diabetic baby is the fact that they are carrying a higher bilirubin level than the normal baby. The bilirubin is the part of the blood that makes the baby jaundiced, and when you get above a certain level of jaundice then you get injury to the brain.

So we are getting some leads in this study as to how to improve and manage these babies of diabetic mothers in order to have normal healthy babies and also to carry the mothers through pregnancy and delivery with the minimum of risk.

Senator POTTER. Doctor, is the same thing true with the male who has diabetes? Before insulin, was parenthood denied him?

Dr. CLIFFORD. Yes. As a matter of fact, one of our leading physicians had been married about 20 years and never had any children. When he began to take insulin his wife got pregnant, and they had a child who is now grown up and is quite a famous young man. That came after 20 years of marriage.

There is an ancient idea that the baby inside the mother's uterus is in a walled city, and is protected from the world so that nothing much can touch him. But we know this is not true now. There are many things in the ways of infection, for instance, that go through and involve the baby.

RESEARCH ON PLACENTA

One of the things that this study has been able to accomplish thus far is to give us the opportunity to examine, in less than a year, a thousand placentas or afterbirths, from women who have delivered at the hospital.

For generations, the afterbirth was something thrown away as unclean and useless. Now we know that the afterbirth has vital bits of information to indicate the conditions inside the uterus before the baby was born. Instead of throwing it away, we now study it.

Just to give you one illustration, we found 10 percent of the placentas we examined, gave evidence that the baby had been infected inside the mother's uterus. We do this by examining the umbilical cord, which is the lifeline between the placenta and the baby, and there you can actually see bacteria.

Sometimes the blood vessels are all clotted as a result of the bacterial inflammation. Of course, when you have swelling and edema, the blood supply is shut off through the placenta. The baby suffers from lack of oxygen and is injured.

Furthermore, we know that the babies who are born with this type of infection are very apt to destroy their blood very rapidly, and having destroyed a good deal of blood, develop jaundice.

With a level of 20 milligrams of bilirubin per 100 cc's of blood, you get brain destruction and you get cerebral palsy and kernicterus.

The moment the baby is born and we find that he has been exposed, we have a chance to start antibiotic treatment and get 2 or 3 days' head start and prevent the infection from causing jaundice.

This is done very simply. Any hospital can do it with 2 minutes of time and $200 of equipment. It is like a breast operation or anything else. They do a frozen section. The operator waits until he finds out what the frozen section shows to determine how he is going to act, whether he takes the tumor out or not, or how much he takes out.

In this case, we send the cord down and the pathologist freezes it. Within a few minutes he looks at it under the microscope and tells us whether this baby is clear and perfect or whether there is any infection.

If the baby has infection, we know, we may have a lot of trouble coming. We treat him and avoid this trouble and possible later damage. It has worked out most satisfactorily.

As I say, this has all come out of this ability to concentrate information out of the collaborative state.

Senator HILL. Of all the babies now born in your hospital, you immediately examine their cord?

Dr. CLIFFORD. That is right.

Senator HILL. I wonder how general it is.

Dr. CLIFFORD. Not general at all. It is done however in each of the hospitals in our collaborative project.

Senator HILL. It is the first time I have heard of it. I can see the tremendous importance of it.

Dr. CLIFFORD. Yes, sir. I could go on.

RH DISEASE

We now have a very exciting new lead opened to us using the modern advances of the electronic age. You probably know about erythroblastosis, or the Rh disease where the mother is Rh negative, and the baby inside the uterus is Rh positive.

Somehow the baby's blood, the Rh positive blood, mixes and gets in the mother's bloodstream, and the mother's Rh blood reacts to protect itself against the Rh positive blood and produces what we call antibodies or antigens that destroy the baby's blood.

That is fine for the mother, but the baby is born wtih the blood destroyed. Instead of 5 million or 6 million red corpuscles he has 3 million, and he gets jaundice.

Until we knew about exchange transfusions, if he survived, he was mentally retarded and crippled.

Now we can prevent this, and have, through the exchange transfusions, but we still do not understand how the baby can involve the mother and the mother involve the baby. We have assumed that it is due to the fact that there must be something missing somewhere. We had thought of the placenta previously as a complete barrier, that the babies' blood was on one side and the mother's blood on the other.

However, we know now, through a very ingenious device, that it is possible now to actually detect the presence of the babies' blood cells in the mother's blood stream.

USE OF ELECTRONIC COUNTER

We do this now by means of what is called a Coulter counter. It is an electronic device that will take the mother's blood in a measured quantity diluted in a beaker of salt solution. It will run this blood through a pinhole opening.

As each blood cell goes through, it trips an electric current and sends an impulse through, so that you count every individual red cell as suction draws the mother's blood through this tiny opening.

You can count 5 million red cells as quickly as you can snap your finger, and you get an accurate count of each cell.

Senator HILL. Doctor, how long have you had that machine?

Dr. CLIFFORD. It is brandnew. Within a matter of 2 or 3 months.

Senator HILL. Where was that primarily developed?

Dr. CLIFFORD. In Buffalo. It was developed for other purposes.

It was demonstrated to me the other day. You can take distilled water which is purer than this water and you put the solution up and turn on the instrument. It draws a cubic centimeter of water through this little tiny opening, and the apparatus goes clickety-click and it says "375".

What does that 375 mean? It means 375 grains of dust were counted in the water. You can put specimen after specimen through the test, and the total always comes out the same. It is absolutely fantastic.

This apparatus now gives us the count, and we can detect in these individual cells, by agglutination mechanisms, clumps, and pull out from the mother's blood cells the exact ones that come from the baby.

A mother will carry 6 quarts of blood in her system. You can pick up the spilling over or leakage of 1 teaspoon of the baby's blood into the 6 quarts.

I cannot take much more of your time to summarize. I guess you can judge that we, in the collaborative study, are all extremely enthusiastic about its potential and what it is going to do for countless children.

Senator POTTER. Doctor, I am interested in this. You mean to tell me that this machine can take blood from a woman and sort out the blood from the baby that might have leaked into her system?

METHOD OF USING COUNTER

Dr. CLIFFORD. This is the way you do it. You take a sample from the mother. You take that sample out and put this through the counter and you will find the exact total in a tiny little bit of her blood; that is, the proportionate red cells per a given unit of her blood that you have in this solution.

The baby's blood is Rh positive and has different types of serum. You can produce a serum that will coagulate or clump the baby's Rh positive cells, and instead of being in the solution like a single red cell when they are clumped, and anybody can see it, they look like little golf balls. So you get the total count per unit in the mother's blood.

Then you look at this blood sample in a counting chamber and you count the number of these clumps in relation to the number of unclumped cells. That is the ratio. So you actually multiply that proportion by the total number of cells you have, and you have exactly the number of baby cells that are inside the mother's circulation.

Senator POTTER. How do you get the baby's cells out of her system, or do you not?

Dr. CLIFFORD. You do not get the baby's cells out of her system, but you know that the baby's cells are kicking up a rumpus in the mother's system and you can immunize her so that her next baby may not bring trouble. It forewarns. It is a red flag.

Senator HILL. This is most interesting, because this matter to which you have addressed yourself has caused a lot of trouble in the past, has it not?

Dr. CLIFFORD. That is right, sir. It is newly discovered. It has been going on since the world began, but we never knew about it until 15 years ago.

Thank you, Senator.

Senator HILL. Are you finished?

SUMMARIZATION

Dr. CLIFFORD. I just want to repeat that I hope every consideration will be given to the opportunity to allow us to bring out full quota of collaborators in the study and get support for a central coordinating agency in Bethesda to make meaning out of the contribution.

(The formal statement referred to follows:)

NATIONAL INSTITUTE OF NEUROLOGICAL DISEASES AND BLINDNESS, STATEMENT OF DR. STEWART H. CLIFFORD

Mr. Chairman and members of the committee, I am Stewart H. Clifford, assistant clinical professor of pediatrics at Harvard Medical School, pediatrician in chief of the Boston Lying-In Hospital, and chief of the newborn service at the Boston Children's Medical Center. For 30 years, I have been in active private practice. During most of this time, I have also been in charge of the Boston Lying-in newborn service with responsibilities for patient care, teaching, and clinical research. The experience gained from the 150,000 births that have occurred during this time gives me a fairly good idea of some of the major problems that remain to be solved in this age group.

The time from birth through 28 days is called the neonatal period. In the past 30 years, the neonatal mortality for this country has fallen from 36 to 1,000 live births to 18 to 1,000. In our hospital, the fall has been from 23 to 1,000 to 13 to 1,000. Practically all of this improvement has been in the full-term infants; 11 of our 13 deaths per 1,000 were premature infants weighing less than 5½ pounds. In spite of all of the advances in modern medicine, the mortality for the premature group is practically unchanged from 30 years ago. One reason for this is that most of the deaths take place within the first day after birth. This is also true of the full-term infants that die. Dr. Herman Bundensen, of the Chicago Board of Health, has correctly stated that "there has been no reduction in natal day deaths in 40 years." The conclusion is evident that the same factors must be operating to kill a baby the minute before birth as the minute after birth, and to improve the lot of the infant lost soon after birth we must know what destroys the baby in the mother's uterus. In other words, we must know more about the growth and development and problems of the baby in the uterus. This approach has given rise to a study of "perinatal" problems, which means those affecting the baby inside and outside the uterus. Perinatal deaths are exceeded only by deaths from heart disease, cancer, and vascular lesions of the central nervous system.

While it is a tragedy to suffer the loss of a baby, it is also a great tragedy to have one survive as a mental and physical cripple; the tragedy is compounded when either the death or the damage might have been preventable. The condi-

tions that influence both the favorable and unfavorable formation, growth, and development of the fetus in the mother's uterus are even today poorly understood. Likewise, the ultimate influence of the many factors and forces that surround the actual birth of the child have never been investigated by long-term studies. The complex psychological factors present in the mother, father, and family and their effect on the emotional, behavioral, and intellectual development of the infant and child demand careful study over a long period of time.

There are a number of conditions, such as cerebral palsy, mental retardation, and diseases of the sensory nerve organs which we are convinced must be related in some way to the factors just mentioned. However, the occurrence of these conditions is fortunately so rare in the experience of a single hospital that studies on cause, prevention, early diagnosis, and treatment are statistically unreliable and unsatisfactory. Although these conditions may be rare in an individual institution, with over 4 million births a year in the United States, the total number for the Nation represents a major health problem. Recently we have been given another illustration of the importance of this problem to children today. Two major children's hospitals, one at the University of Minnesota and the other at Massachusetts General Hospital, have found that neurological disorders represented over 30 percent of the admissions to the children's services.

To search for knowledge that might lead to an understanding of the causes, methods of prevention, early diagnosis, and treatment of these major neurological problems, the National Institute of Neurological Diseases and Blindness, with the support of Congress, has established its nationwide collaborative study on the perinatal factors in the origin of cerebral palsy, mental retardation, and diseases of the nervous system.

Due to the fact already mentioned, that the incidence of the conditions to be studied is so low in any one hospital, the master plan for this study demands the collaboration of many scattered institutions. Our own experience, reinforced by the advice of our National Statistical Advisory Committee, dictates that the study must accumulate data on a minimum of 40,000 pregnancies and births over a 5-year period to permit statistically valid interpretations. As of the present moment, there are 12 institutions in the study contributing a 5-year total of 31,500 infants. I shall provide the names of these for the record.

To accomplish the 5-year total of 40,000 cases, at least 3 additional institutions should be admitted to the collaborative project.

All of us who are devoting our time and energies to the project urge that an increased budget of $1,250,000 be provided in 1959 to make this project fully effective. Of this amount, $750,000 is needed to provide a sufficient number of patients to produce statistically valid results. To support and coordinate this project with a comprehensive laboratory program and coordinating services in the intramural program at the National Institute, including biometric and epidemiological research and services, $500,000 is needed. With this budget, it will be possible for Institute specialists and scientists to consult with the collaborating institutions and insure uniformity of precedures and collection and recording of vital data. This is essential to the entire program.

The overall project has been in active operation less than a year. This is too short a time, of course, to report any conclusive results. However, out of this short time have come findings of major importance in improving the outlook for the newborn baby. You may be interested in my summary of a few of these findings.

Chemical studies have been made to determine the levels of certain substances in the blood of newborn infants which we know relate to the function of the central nervous system. These include blood sugar, serum bilirubin, hemoglobin, and hematocrit.

After developing a suitable method for collection of blood, so that the results would be comparable from infant to infant, determinations have been made on some 100 newborn infants ranging from 1 hour to several days of age. These ranges established compare with ranges previously published in literature from other institutions.

Three interesting findings have resulted from this study:

1. It has been known that the hemoglobin concentration is higher postnatally than it is in umbilical cord blood. We found, however, in some instances, that this increase has been as much as 40 percent. This could be explained on the basis of stagnation of capillary blood or dehydration of the infant. In either case, infants with such changes should be followed to observe future neurological functions.

2. Blood sugar levels have shown a transitory decrease following birth with a rise of 24 hours of age. However, a small group of infants have been found to have consistently low blood sugar levels even at older ages when feedings have been started.

3. We have discovered that the bilirubin levels of infants of diabetic mothers tend to run higher than levels in infants of nondiabetic mothers. This points up to a group of patients whose neurological development may be correlated with the concentration of a specific substance in the blood. Thus, another group of patients is defined in whom followup neurological evaluations should add to our findings.

Since last August, we have been striving to correlate placental pathology with neonatal diseases. Since then, 1,000 placentas have been examined by gross and microscopic examination. This constitutes all ward delivery placentas. In addition, a large number of placentas of private patients and all placentas of twins and babies who died were studied. The incidence of pathologic findings in this material is astonishingly high. At the moment, we are compiling the figures and we are attempting a correlation with fetal and neonatal diseases.

From previous studies here and in other laboratories, it is evident that many placentas which appear normal show histologic features on inspection which may reflect an abnormal physiology of the infant. It is this category of placentas whose prompt examination may contribute to the understanding and treatment of diseases of the newborn.

Two findings specifically merit mention at this time:

1. A large number of placentas, approximately 15 to 20 percent, show some degree of inflammation. We are accumulating proof that this inflammation starts at the internal mouth of the uterus and contributes to premature delivery rupture of the membranes. Often bacteria are found in the microscopic sections. While most commonly the membranes are ruptured in this inflammatory disease, we have recently published a case with intrauterine extensive monilial infection in the absence of history of ruptured membranes. When the membranes are inflamed, the umbilical cord vessels often show an inflammatory response and we assume that this indicates fetal infection. We see this in approximately 10 percent of routine placentas. Presently, obstetricians and pediatricians ask us to do quick frozen sections of umbilical cords in suspect cases at least once a day and they base antibiotic treatment of the newborn on our findings.

2. Routine umbilical cords not uncommonly show a congenital absence of one unbilical artery. This finding has been published previously by us, and it is significant that it occurs often in association with other fetal anomalies. Our alerting the pediatricians has led to the discovery of unsuspected congential anomalies in a number of instances. If no anomalies are suspected, one must consider the possibility that such become manifest in later life. The finding is frequent in one of twins. Approximately 1 in 200 routine placentas is so affected.

We have recently observed a second neonatal death attributable to intrauterine infection with Coxsackie virus. Because our hospital is now geared to this kind of unsuspected infection, it was possible to obtain the placenta and to perform all of the extensive studies which are being published. Briefly, this baby is the third child of a healthy mother delivered at term. Six days prior to delivery, the mother and her family experienced a cold which was accompanied by some chest pain. This went away spontaneously. The baby appeared normal at first but expired within 36 hours. At autopsy, the principal findings were myocarditis, encephalomyelitis, extensive adrenal and liver necrosis and pulmonary hemorrhage. Coxsackie B4 virus was isolated from various organs of the baby and the maternal stool. There is no doubt that this baby was infected in utero and probably so during the cold of the mother. Had this baby survived, undoubtedly, the cerebral and other lesions would have meant some form of physical and mental retardation.

On numerous occasions, I have had an opportunity to meet with other collaborators in the Institute's perinatal project. I can testify concerning the enthusiasm which all groups have in this project and the deep conviction which we all have that something of great value to children will emerge.

Since the program is new, all the groups are in various stages of tooling up at the present time. There has been a wonderful spirit of cooperation. Certain of the universities and hospitals have been particularly skillful in particular branches of the problem. For instance, the group at Yale University has been interested for years in the neurological growth and develop-

ment of babies and children. We have sent some of our workers from Boston Lying-in to Yale to become conversant with their techniques. In a similarly cooperative fashion, we at Boston Lying-in have had representatives from Charity Hospital in New Orleans, the University of Minnesota, Brown University, University of Oregon, and Providence Lying-in Hospital studying our methods of examining the mother and baby during and after delivery. Much more of this type of cooperation will be seen in the future for much of the work contemplated in this project is an unchartered field.

Erythroblastosis or Rh disease is a very common disease of the newborn and when it is accompanied by severe, untreated jaundice may produce cerebral palsy. The mother who is Rh negative and carries an Rh positive infant in her uterus may be sensitized, so that she produces a substance that destroys the baby's red blood cells, resulting in anemia and jaundice in the baby or erythroblastosis. Up to now, we have suspected that small quantities of the baby's blood may leak through the placenta and enter the mother's blood causing the sensitization. A remarkable method proving this theory to be fact has just been perfected. It is being put to practical use in our project and enables us to know positively in what pregnancy this leakage occurs that produces the sensitization that may result in erythroblastosis in the next pregnancy. The method includes the use of an unusual electronic counter that actually counts each individual blood cell in a solution. A mother has about 6 quarts of blood. This method is sensitive enough to detect the leakage of as little as one teaspoonful of baby's blood into the mother's blood.

As a part of the project, several institutions took advantage of the outbreak of Asian influenza in October and November to study the effect of this virus on the outcome of pregnancy in relation to stillbirths, neonatal deaths or disease, prematurity, and malformations. The possible effects of this virus infection will, of course, not be apparent until these babies are born and studied around midsummer.

One of the collaborating institutions has perfected a method by which an electrocardiogram of the fetal heart in the mother's uterus can be recorded and followed through labor. When this method becomes generally available, it may be of great help in detecting a fetus that begins to suffer from lack of oxygen.

All of us who are cooperating in this national endeavor do so with the realization that only through widespread collaboration can the answer be found which will make it possible to prevent certain cases of cerebral palsy and mental retardation. We all realize that the incidents of these conditions in our own personal experience is so low that it would take a lifetime to accumulate sufficient material on which to make conclusions. Combining forces, therefore, is the only way this problem can be studied with some hope of success.

At least 3 additional collaborating institutions should be added to this group to achieve our minimum goal of 40,000 infants. There is no question but that more than three are ready and anxious to join the project if support can be provided.

University of Iowa Medical School

STATEMENT OF DR. ALSON E. BRALEY, HEAD OF DEPARTMENT OF OPHTHALMOLOGY

General Statement

Senator Hill. Dr. Braley, it is a forward pass to you, sir.

Dr. Braley. I appreciate coming here again this year. I will identify myself and submit the prepared statement for the record, but I will try and emphasize at least briefly some of the existing things that have been going on.

As you know, the number of persons afflicted by blinding diseases and hearing disorders is simply tremendous. The cost to the Nation for their care and rehabilitation is extremely high. I always think that much should be spent for investigation, for research.

Senator Hill. And prevention.

Dr. Braley. And prevention; that is correct.

Now, of course, it is estimated that more than 40 percent of the population have eye defects and need glasses. There are, of course, a great many legally blind people in the United States. I have estimated it roughly at a half a million people.

There are more than a million and a half people who are blind in one eye. There are about 2,700 people going blind every year.

Senator HILL. You mean when you say blind that they cannot see with glasses?

Dr. BRALEY. They cannot see. These people have many diseases; glaucoma, cataracts, uveitis, retinopathy, and oscular tumors.

It is also estimated that there are 15 million Americans with some kind of a hearing defect of which approximately four and a half million are seriously handicapped and 760,000 are totally deaf.

RESEARCH ON NERVE REGENERATION

Speaking of this totally deaf group and of many others, there has been some exciting research done on nerve regeneration recently. Also, one of the interesting things is the report that I thought you would like to know about of an induction coil placed in the ear. It is most interesting. It is done in France.

The patient had a bilateral tumor of both of the auditory nerves. They made a little coil which they inserted in the ear connecting one end of the coil to the muscle and the other end to the nerve. This is a little tiny coil that is placed in the ear.

Then, by taking another coil, an induction coil, on the outside of the individual, they hooked it up to a microphone, and this particular individual was able to hear. It was most amazing, I thought.

It points to the fact that perhaps we should be working along these lines, at least to try to rehabilitate people. This is part of rehabilitation, but it is certainly part of investigation also.

Senator HILL. Do you have an extra copy of that article?

Dr. BRALEY. No, sir. This is the only copy I have. I will be glad to give you that.

Senator HILL. Just identify it for the record because we can get it, I am sure, from the Library of Congress. We do not want to take your only copy.

Dr. BRALEY. It is perfectly all right. Yes, put it in the record.

Senator HILL. We will have some photostats made of this and send the original back to the doctor.

(The material referred to follows:)

HEARING BY INDUCTION COIL CURRENT— A TINY COIL BURIED IN THE TEMPORAL MUSCLE DIRECTLY EXCITES THE AUDITORY NERVE

From an article by A. Djourno and C. Eyries in Presse médicale, 65: 1417, August 31, 1957

Early in 1957, a patient who had been totally deaf for some time following bilateral operations for cholesteatoma, begged his surgeon to try on him an operation which had shown some promise in experiments with animals. Though all the structures of the middle ear had been destroyed, a small segment of the auditory nerve was accessible through an opening in the labyrinth on the right side. It was proposed to implant an electrode directly in contact with this exposed nerve so it could be stimulated electrically.

A very small induction coil was constructed in the physics laboratory of the Faculté de Médecine de Paris. This was tested in the field of a suitable primary

coil, and was found to develop potentials on the order of 1 volt; its resistance was in the range of 20 to 50 ohms. The coil was implanted in the mass of the temporal muscle and one terminal was connected to the muscle to form the indifferent electrode. The other terminal was a wire insulated by a very fine polyethylene tube. This was led to the exposed nerve in the right labyrinth and was placed in contact with it. No leakage of cerebrospinal fluid was observed. Following the operation, the patient noticed a continuous hissing sensation, but this disappeared in 2 days. Then the first experiments with induced current were attempted.

Through an external coil placed near the buried one, an alternating current at 100 cycles, interrupted 15 to 20 times per minute, was passed. The patient immediately reported an auditory sensation which he compared to the chirping of a cricket, or blasts on a police whistle, depending on the intensity of the current. A microphone and amplifier were then placed in the circuit of the external coil, but speech was completely unintelligible to the patient at first. After some practice, the patient could distinguish a difference between words like "papa," "mama" and "hello," and after three sessions these words were recognized. "Coding" was thus shown to be possible, and a program of reeducation was begun. Unfortunately, this had barely commenced when all auditory sensation vanished. At first it was thought that the polyethylene insulation had failed, but a second operation revealed that the connection to the temporal muscle had broken, and this was repaired. By that time, the coil had been in place for 3 months and no sign of reaction to it was seen.

Following the second operation, auditory perception returned; words that had previously been "coded" retained their original meaning, and were understood. The patient's reeducation continued. At the time of writing, the patient reported that his hearing was still subject to considerable distortion: he experienced "a background of voice, accompanied by a certain metallic stridulence"; if this metallic timbre were not there, he thinks he could understand words much more easily.

The patient loves to leave the external coil connected to the microphone in order to hear people come and go, hear the door close, and listen to the voices around him. When the circuit is turned off, he is plunged into a profound silence which is unbearable to him. On the other hand, if something inadvertently knocks against the microphone, he experiences a violent blast of noise which leaves him deafened for several minutes.

No vertigo or disturbance of equilibrium has been encountered.

REPORT AVAILABLE

Dr. BRALEY. The professional articles was published in French, but we have translated it.

Speaking along these lines, this scientific report is now available, and with these new findings coming to our attention it points, I think, to something most interesting, the need for a greater cooperation on international research.

I think perhaps Dr. Merritt may have something more to say on this subject a little later on.

GLAUCOMA

Just to briefly discuss the problem of glaucoma, here is an example of the need for research in our sensory disorders because of the difficulty we have in detecting glaucoma.

There are roughly 5,000 people in the United States who go blind every year with glaucoma and about a million people in the United States probably have glaucoma right now without knowing it.

We estimate that between 2 percent, and in a recent study we did, in Iowa City, 10 percent of the population over 45 have glaucoma.

If our 10-percent figure stands up, and I am not sure that it will, this is going to be a very large proportion of the population having a seemingly preventable disease, providing we can do enough research

in that area to make good methods available for diagnosis, which are not available at the present time.

During the past year the institute here under Dr. Ludwig von Sallman, whom we are very proud of, and who is head of the eye section, made some very important advances in this mechansm for diagnosing glaucoma, showing that it was not only the intraocular pressure that was important in the eye, but the rigidity of the eye itself. The pressure measurement may not be the entire thing, but the rigidity of the coating of the eye may be very important.

CATARACTS

I know all of you are well acquainted with cataracts because most of you have probably had some contact with someone who has had a cataract. This is a very interesting subject that we have done a great deal of work on. Many of these people can be rehabilitated.

However, I think we should do a great deal of research on how to prevent cataracts.

Senator POTTER. What causes cataracts?

Dr. BRALEY. I have no idea, sir. We have recent studies which indicate that the amount of lactic acid in older people's lenses indicate that the metabolism of the lenses may be interfered with. This lens in the eye where the cataract occurs normally is transparent and is surrounded by the aqueous humor, by the fluid, and gets all of its nutrition by diffusion, more or less. So it is possible that lactic acid could build up here.

We are continuing to do research along these lines. This is one lead that we have gotten that may be of some importance.

This lactic acid probably interferes with the normal consumption of glucose. We know that things that interfere with the normal metabolism of glucose in the lens certainly will produce cataracts.

LACK OF PERSONNEL

I think one of our biggest difficulties in both hearing research and in opthalmology research is the lack of trained people. As chairman of the institute's training grants committee in opthalmology, I would like to say that the acute shortage of trained investigators and teachers in this field is acute.

All you have to do is go to almost any medical school and you will find that these areas are neglected. Not only is the investigation neglected, but the whole teaching area is neglected.

I was going to say that I was delighted that Senator Thye was here because I have been pushing to get a department of opthalmology with investigation and a full department started at Minnesota. They have just started it now. I want competition down there. If they will compete with me, it would be wonderful.

GRADUATE TRAINING GRANTS

This program we started in training opthalmologists for careers as investigators has developed slowly, but we have made some good progress. At the present time we are supporting 34 graduate training grants. Out of this number we figure we have something in the

neighborhood of 238 opthalmologists who are receiving some training under this grant.

In addition to this, we have a special traineeship program which was initiated in 1957 which provides additional postgraduate training for only 16 opthalmologists. This is not very much.

In the hearing field the situation is even worse. Here we only started in 1957 when three grants were awarded for postgraduate levels. In 1958 there will be 12 grants I think.

Now, there are again only about 12 special trainees who are being trained as investigators in this field. I think one of our main needs is the training of people.

I would like to urge support of the budget that Dr. Merritt will present and certainly would like to have our training area extended.

Senator HILL. Dr. Bailey, the head of the institute was here a year or two ago. I asked him why we had not done much in the field of opthalmology ad the field of hearing. He made the very answer that you made here today, that we simply did not have the personnel to do the job. So I am delighted that you have, among other things, emphasized the training program, how necessary it is that we get the personnel to do the job.

Senator Potter, do you have any questions?

REASON FOR NEGLECT OF FIELD

Senator POTTER. I was just interested in the reason why the medical schools have neglected this field. Is there any particular reason, or is it because it is not as dramatic as some of the other types of programs?

Dr. BRALEY. I have some answers to that, but I get so enthusiastic whenever I try to answer it that I would rather defer to my colleagues here and let them answer.

Senator POTTER. Maybe strong language is needed.

Senator HILL. Doctor Merritt will soon be the dean of that fine medical school in New York, the College of Physicians and Surgeons, now the medical school of Columbia University.

Would you like to address yourself to that question, Doctor?

PLIGHT OF MEDICAL SCHOOLS

Dr. MERRITT. As you know, all of our medical schools are running on very short finances. They hardly have enough money to teach the medical school students and run 1 or 2 of the departments that they call essential; medicine, surgery, obstetrics, and gynecology. That leaves the specialist in opthalmology and neurology and others somewhat on the outside.

Because of the lack of money these areas have not been fostered. We, through the program we propose are hoping to foster these and to get more educators and more research workers in the specialized fields.

IMPORTANCE OF RESEARCH ON BRAIN

We look on the brain as the guiding organ of the whole body. Of course, the eyes and the ears are a part of the brain. It is only through eyes and ears and our brain that we can communicate with the world. Anything that we do to improve this is of great importance.

Could I have just a minute to talk about some of Dr. Clifford's remarks? I do not think there has been a sufficient emphasis on the wider aspects of the perinatal project.

WIDER ASPECTS OF PERINATAL PROBLEM

This question of pregnancy wastage is just as important as cerebral palsy. We have emphasized cerebral palsy, but for a mother to have a baby born prematurely or have a spontaneous abortion in the fifth or sixth month is a great catastrophy.

Then for a mother to have a child born with cerebral palsy, feeblemindedness, epilepsy, is also a very great catastrophy. All of these things are a part of this study. Not only what happens to this baby's nervous system is a part of this study, but what happens to the baby's heart, because congential heart disease is just as much the thing that is affected by the pregnancy as the nervous system.

Also, congenital malformations of the head, the limbs, and other such things.

We used to think that inheritance played a great role in the production of these malformations and feeblemindedness, mental retardation, and epilepsy. But we are finding more and more that there are things that happen to the mother during pregnancy that may be the cause.

We can reproduce in animals practically any malformation that humans have by exposing the animals to certain toxic factors. We do not know how much these toxic factors react on the human mother, but we have to find out and we have got to learn about other factors that we have no idea about now.

This perinatal study is much wider than just cerebral palsy. When you work with people in the field of epilepsy, they believe that the majority of its victims have it because of something that happens to the brain, either just before birth or after birth. The field is very great and the problem is large and is going to take our best brains to try to prevent abnormal conception. It is one of the greatest tragedies in the life of a mother to have a child that is not normal.

It is through studies of this type that we are going to solve this problem. We cannot solve it in any other way.

EMPHASIS NEEDED ON SIGHT AND HEARING PROBLEMS

Dr. BRALEY. I would like to add one other thing. This is with regard to ophthalmology and otolaryngology. These are very important areas that have been neglected.

I think all medical schools will eventually develop these fields if the need is pointed out to them.

Senator POTTER. I was particularly interested in your remark about the French scientist who perfected this induction coil for the ear. I wonder how much liaison we have with the scientists in other countries in this field.

NEED FOR INTERNATIONAL PROGRAM

Dr. BRALEY. There is an area that we would like to develop, an international program, a more widespread program. We do have some liaison through our special traineeship program where men are sent

there. We do have some exchange, but certainly the exchange is not as great as it should be.

Senator POTTER. Do you participate in any degree with the World Health Organization?

Dr. BRALEY. I have, yes.

Senator POTTER. I know with regard to cancer research they have some sort of international cancer organization. They will be meeting in London in July of this year. They meet every 4 years. Leaders from every country attend. It is a lay organization. It is not a government organization.

They meet and there is a certain exchange of ideas and papers. I do not think it is nearly enough. I think the heads of state should set the pattern in this field, not only in cancer, but in other areas of medical research.

I think there is a great waste of progress because we are not as familiar as we should be with the advances made with scientists of other countries. Possibly they suffer the same lack of information with regard to what we are doing in certain fields.

I am thoroughly convinced that it would be helpful, not only for what it would do for research, but for people, to realize that the United States and other nations are interested in pooling their resources for good rather than something of nationalistic interest.

I think the governments should set the pattern of great interest for a humanitarian cause, and it would do more good.

I am hopeful that the day will come when we will have a much greater liaison in this field among nations.

Dr. MERRITT. May I add something?

Senator HILL. There certainly should be such an organization.

WORLD FEDERATION ON NEUROLOGY

Dr. MERRITT. In my remarks, I tell about the formation of the World Federation of Neurology. This was founded at the last meeting of the International Congress of Neurology.

Formerly, we just had a congress that met every 4 years. We got together and nothing went on in between. Now we have established a World Federation of Neurology which is working all the time to try to bring together the neurologists and the works of the neurologists in various parts of the world.

It is interesting to note that Dr. Bailey and I were on the forming committee of this world federation in Brussels last September. Dr. Bailey is the secretary-general of this organization.

Senator HILL. He is secretary-general of the federation?

Dr. MERRITT. He is secretary-general of the World Federation of Neurology.

Senator HILL. That is most interesting.

As Senator Potter says, certainly we should move and move expeditiously to try to bring together all of this knowledge.

Senator POTTER. That is correct.

Senator HILL. I am delighted this morning to know that the land of Pasteur has made this contribution. We have been hearing some very unhappy things about La Belle France in recent months.

UNUSED FUNDS

Let me ask you gentlemen this question: I am informed that between $250,000 and $300,000 of funds for training in neurology and blindness activities will be unused this year; that our schools have not been interested in going forward with the courses that you gentlemen of the council and the National Institute have wished them to carry forward.

Dr. MERRITT. I think that can be explained.

Senator HILL. Tell us, because we are very likely to be met with this very problem.

Dr. MERRITT. It takes time to get these programs developed. I think that if this figure were taken after the meeting of the committee that met last week, it would not exist. Last week the committee met and passed on a great number of applications.

Senator HILL. You met last week? This information was no doubt prior to that time.

Dr. MERRITT. We passed on a great number of new applications then.

The committee is moving slowly. We try to see that a program, when it is put on, is going to be a good one.

An application may come in and we will go to the center and tell them, "This is all right, good, but it should be better."

An application may come in and it may be several months before it can be approved. So there is a lag.

I am sure that next year, with the expansion in the training programs in ophthalmology, otolaryngology and neurology, and especially the expansion that we hope to make in the basic science field, neurophysiology, neurochemistry and neuropharmacology, that we are going to have a money deficit.

It is these latter fields that we are trying to concentrate on because it is through the advances in these sciences that we are going to solve our problems.

Senator HILL. In other words, you think then that there is no doubt that the funds that you are requesting for training purposes will be and can be fully used, and used to great advantage?

Dr. MERRITT. They certainly can.

ADVANCED TRAINING RESEARCH GRANTS

Dr. CLIFFORD. Senator Hill, there is a new set of grants that have just been approved that are helping to solve this problem in all the health fields.

Take the dilemma of a medical student who goes through 4 years of medical school, then he goes 2 to 3 years in a hospital. By that time he has some Army service ahead of him. He may have a wife and 1 or 2 children. He is well trained to go out into general practice.

Now he faces a dilemma, because he cannot accept one of these grants because he has not reached the point where he can do research work. He has to have more training.

There is the bottleneck of men who want an academic career or a training career.

With regard to the boys who finish their internships and need backing where they can get doctor of philosophy type of training

in basic science before they devote themselves to research, we have had no support for them.

So what have they done? They wanted to go into teaching, they wanted to go into research, but economic forces made them go out into practice.

Senator HILL. I can well understand that.

Doctor, do you want to add something to that, sir?

REASONS FOR NOT USING TOTAL FUNDS

Dr. BRALEY. I have so many reasons for us not using all of the funds that were available. I think they will be used with the new group of applications coming to the Council in June; at least there won't be very much left.

Part of the reason is that we go to visit a medical school that may apply for ophthalmology, and they do not even have an ophthalmology department. They have inadequate means of training anybody, particularly to train people as investigators. We have to train the investigators to go someplace to have them.

This has been a real problem.

All of the emphasis in ophthalmology and otolaryngology has been primarily on service and very little on investigation.

Senator HILL. For investigation?

Dr. BRALEY. That is right. The most important thing I think is to try to slant these people toward investigation which will, of course, eventually, pay dividends.

Senator HILL. Oh, yes.

Dr. BRALEY. But we are trying very hard at least in our training grant committee, to develop those people who are likely to become good investigators.

Senator HILL. And you think you are making good progress?

Dr. BRALEY. We are making excellent progress, sir.

Dr. MERRITT. May I just go back to medical school problems?

Senator HILL Yes.

EXPANDED FUNCTIONS OF MEDICAL SCHOOLS

Dr. MERRITT. Some years ago, medical schools were primarily for training of doctors. There were only a few medical schools that were carrying on research. Now, practically every medical school in this country realizes that part of its obligation is for advanced knowledge, and they are not there only just to train doctors.

This expansion has to be continued. This expansion is now taking place in fields that were neglected before. It is not because the medical schools did not want to do so, it was because they just did not have the funds.

The funds that are being supplied by the Public Health Service for this research is going to revolutionize medical education as well as to improve the health of our citizens.

Senator HILL. In other words, you think that the medical schools now are directing their thought and their inspiration more and more not only to turning out what we call practitioners, whether they be practitioners in surgery or medicine or whatnot, but also in the field of research?

Dr. MERRITT. Yes. All of our good medical schools now have a research program for their students. The students are either required or encouraged to take a certain period of their training in research. We are finding more and more students who will take a whole year, between their second or third year, and spend it in research.

That fellow, when he finishes, is going to be a research worker. We are giving money to medical schools to subsidize a student for this period of research.

Senator HILL. Then you feel the situation today really looks very encouraging with regard to the future?

Dr. MERRITT. Very encouraging.

Dr. BRALEY. Very encouraging.

Senator HILL. Dr. Braley, I said when Dr. Clifford concluded and Dr. Merritt concluded that you had the ball. You certainly did a beautiful job taking it down the field.

(The statement referred to follows:)

NATIONAL INSTITUTE OF NEUROLOGICAL DISEASES AND BLINDNESS

Statement of Dr. Alson E. Braley

Mr. Chairman and members of the committee, I am Alson E. Braley, professor and head of the department of ophthalmology at the State University of Iowa Medical School. I wish to recommend the continued expansion of the research and training programs of the National Institute of Neurological Diseases and Blindness.

The number of persons affected by blinding diseases and hearing disorders is so great and the cost to the Nation for their care and rehabilitation so high, I urge your careful consideration of an appropriation sufficient to move ahead research on blindness and hearing defects with all possible speed.

It is estimated that approximately 40 percent of our population have eye defects and need glasses. There are about 334,000 legally blind persons in the United States today and almost 1½ million who are blind in one eye. Of the estimated 27,000 persons who will go blind during the next 12 months, more than half will be blinded by disease. Glaucoma, cataracts, uveitis, retinopathy, and ocular tumors continue to be the major cause of blindness. There are, also, an estimated 15 million Americans with some kind of hearing defect. Of these, 4½ million are seriously handicapped and approximately 760,000 are totally deaf.

Fortunately, we have become more aware in recent years of the scope of the problem of sensory disorders. In the few years since the creation of this Institute, significant progress has been made through research conducted both at Bethesda and through grants to leading scientists and institutions. This progress is extremely gratifying to me. I see people every day who have lost their sight or hearing or are in the process of doing so. I know the hopeless feeling which many of these persons have since loss of sight or hearing often means loss of job, grave financial problems, and a complete emotional and social adjustment.

In addition to recent accomplishments, research has brought us to the verge of many discoveries. Some of these could make possible a completely new life for many persons.

Optic nerve regeneration

This is a day when hope should not be abandoned. Many things, long believed impossible, are now in process of becoming a reality. It has now been found that it is possible to regenerate the optic nerve. Many experiments have been conducted with certain animals which show that the optic nerve can be cut, later given an opportunity to regenerate, and eventually the animal actually can see. Grantees of the Institute also have demonstrated regeneration not only of peripheral nerves but also of the spinal cord.

Retrolental fibroplasia

I have discussed with you before the success of the program on retrolental fibroplasia which was initiated in 1954. This disease, until recently, blinded thousands of premature babies every year. Within 2 years the cause of the

disease was positively associated with the duration of exposure of premature infants to oxygen and all pediatricians and hospitals in the United States were alerted as to the proper preventive measures. For all practical purposes, this disease has now been wiped out.

Hearing stimulated by electricity

Some of the new advances in medical research currently are being made at foreign universities. An example of this is the unusual experiment in hearing conducted in Paris recently of which many of us have read. Tumors were removed from both ears of a patient and he lost his hearing completely. Later, he was able to hear when the hearing nerve was stimulated by electricity. His hearing was sufficiently good for him to hear even the chirping of a cricket.

The scientific report of this experiment is now available. Scientists here will, of course, look into all the possibilities which this presents. These new findings have come to my attention only recently and show the need for greater cooperation in international research. Dr. Merritt is also speaking to you on this need.

Glaucoma

Another example of the urgent need for research with sensory disorders is the difficulty which has been encountered in detecting glaucoma in an early stage. We know that glaucoma is one of the most deadly of the blinding diseases, and that it destroys the sight of thousands of Americans every year and severely impairs the vision of thousands of others.

About one millions persons have glaucoma without knowing it, may lose their sight if untreated, and may suffer severe damage of their sight unless the disease is detected at an early stage.

This past year at the Institute, under the immediate direction of Dr. Ludwig von Sallmann, one of the world's leading ophthalmologists, an important discovery for the diagnosis of glaucoma was made.

For a long time, we have believed that the main cause of glaucoma to be the increase of intraocular pressure in the eye. Dr. von Sallmann and his group now have discovered that the rigidity of the eye varies with the pressure on the eyeball rather than remaining static as previously believed.

Inasmuch as the measurement of the pressure is the basis of glaucoma diagnosis by the widely used tonography method, any measure which does not take rigidity changes into consideration might fail to make an accurate diagnosis.

A corrective technique which compensates for the rigidity changes has now been worked out, and we expect that it will be applicable to patients soon.

Cataracts

To many, some diseases of the eye such as uveitis seem very remote as they have never known anyone who has had the disease. On the other hand, almost everyone has had a friend or relative who has had a cataract. Recent studies are shedding light on the relation of age to this disorder.

A cataract is characterized by the normally transparent lens of the eye becoming opaque. It is entirely self-contained, having neither vascular nor nerve connections. The lens is surrounded by the aqueous humor and is dependent on it for the metabolic exchange which determines its vitality.

Recent studies have shown a much higher concentration of lactic acid in older lenses, supporting the general theory that metabolic activity of the lens decreases with advancing age.

It is hoped that these findings concerning chemical changes in the lens metabolism will lead to the possible prevention of cataracts.

Hearing research

Considering the scope of hearing defects—millions of persons, the Institute's research program in this field has not been large. I am pleased to report, however, that it has seen notable expansion this past year. The scope of the program now ranges from basic studies of the sense organ of hearing and the physiology of transmission of nerve impulses to the clinical studies of specific disorders and effects of aging upon the auditory process.

Training program

As chairman of the Institute's Training Committee on Ophthalmology, I continue to have a very direct concern with the acute shortage of trained investigators and teachers in the ophthalmology field. As you are all well aware, the best laboratory facilities and the most advanced research techniques mean little if we lack the trained specialists required to man them.

Although the program of training ophthalmologists for careers as teachers and investigators had developed slowly, considerable progress has been made in the past few years. At present, the Institute is supporting 34 graduate training grants. Two hundred and thirty-eight ophthalmologists are receiving training under these grants. In addition, the special traineeship program which was initiated in 1957 will provide postgraduate training for 16 ophthalmologists.

The situation in the hearing field, insofar as trained investigators and teachers are concerned, is very acute. Recognizing this need, the Institute's training program has expanded steadily since fiscal year 1957, when three grants were awarded at the postgraduate level in the clinical field of otolaryngology. In fiscal year 1958, 12 training grants will be supported and approximately 12 special traineeship awards will be made.

Our hope for coping effectively with the many and varied blinding diseases and hearing disorders is tied, to a very large extent, to a successful training program which will meet the existing dearth of teachers and investigators in the shortest possible time.

I, therefore, urge you to support the budget of the citizens' committee and its recommendations as submitted by Dr. Merritt.

NATIONAL COMMITTEE FOR RESEARCH IN NEUROLOGICAL DISORDERS

STATEMENT OF MRS. ED W. JOHNSON, REPRESENTATIVE

INTERNATIONAL NEUROLOGICAL PROBLEM

Senator HILL. Mrs. Johnson, do you want to take it over the goal line?

Mrs. JOHNSON. I would be glad to.

Mr. Chairman and members of the committee, I am Mrs. Ed W. Johnson of Wayzata, Minn., privileged to appear before this committee for the third time as a representative of the National Committee for Research in Neurological Disorders.

My appearance now has an urgency and immediacy far beyond that of the previous hearings. On those occasions, the focus was on the development of a program to fill our national needs. Training of neurologists and related scientists for teaching as well as research has been a primary consideration.

Now, however, we have been suddenly alerted to global consideration. The international stature and implication of neurology began to take shape for me after hearing Dr. Pearce Bailey of the National Institute of Neurological Diseases and Blindness review a paper entitled "Problems of Clinical Neurology in the Sixth 5-Year Plan by Prof. N. I. Grashchenkov.

REPORT ON PROBLEMS OF CLINICAL NEUROLOGY

May I share with you some of the salient points which were included in that report?

1. "Clinical neurology represents the action center of the entire organism and therefore progress made in this field contributed to progress in all divisions of clinical medicine and biology."

I think this has a very marked connection with Dr. Clifford's remarks. This is a pilot study for perhaps other research studies in other fields.

2. The recommendation that interdisciplinary collaboration be used to attack specific problems.

3. The establishment of problem commissions to pinpoint a given problem area.

4. Neurologists in Russia—6,044 clinical neurologists and 16,092 persons engaged in neurology. This is approximately three times the number reported in 1946.

These facts are meaningful to me. For example, I am aware that in the United States there are approximately 400 qualified neurologists. By definition the figures may not be comparable.

SOVIET NEUROLOGICAL PERSONNEL

The question, of course, immediately arises as to whether a trained clinical neurologist in Russia is identical with one in the United States.

Nevertheless, this simple fact remains that Russia now has more technicians. With this accelerated program, which seems to have extensive resources, the number of trained neurologists undoubtedly will increase and research in Russia will benefit.

Here to me are hard, cold facts which demand a widespread understanding of the problem by lay people and an extension of research to find the answers to the problem.

Incidentally, I would be glad to make available for this record a digest of this report if you so desire.

Senator HILL. We will be happy to have you do that.

Mrs. JOHNSON. I do not mean to suggest that the United States should plan its national programs according to the programs of other nations. Nevertheless, not to be cognizant of all available information concerning any specific field of interest is a serious omission. I share with you the foregoing facts on this basis alone.

GRANTS PROGRAMS OF INSTITUTE

For more immediate attention let us consider the plans and programs of the Institute. When we pause to consider the tremulous beginnings of the National Institute of Neurological Diseases and Blindness in 1950 against its present status, we have reason to be proud.

Through the appropriations you provided in 1957, it was possible to have 109 training grants. During the current fiscal year there are approximately 130 grants totaling $3,500,000. Of these, 60 are in clinical neurology, 40 in opthalmology, 12 in otology, 6 in neuropathology, 4 in pediatric neurology, and 2 in neurochemistry, neuropharmacology, neuroanatomy, and neurophysiology.

In addition, approximately 140 traineeships and fellowships have been awarded during 1958.

It is significant that because of the careful selection of those receiving grants—this is one of the things that Dr. Merritt referred to—108 of the 175 who have completed their training under Institute grants are now teaching or are in research positions. Here is positive proof that congressional appropriations can be used as a sound investment.

Because of the success of the training program, it has been much easier in recent years to find research scientists in the various disciplines to participate in research at the Institute and at universities and hopsitals across the Nation.

It is most necessary to give these trained men further opportunities to carry on their research and to extend themselves into new fields if we are to consolidate the gains we have already made.

RESEARCH GRANTS

During 1957, 640 research grants totaling more than $9 million were made. I understand that it is expected that the $10,750,000 allocated for the fiscal year 1958 will have supported approximately 715 research grants.

Our committee is proposing an increase in research grants to outside institutions for the coming year. This money will be used to meet a backlog of unpaid but approved grants, the rising cost of research, additional money for the collaborative projects in cerebral palsy and in cerebral vascular disease, and for other new research developments.

I am very much interested in the Institute's research grants program and I would like to cite as an example the distribution of such grants in the State of Minnesota with which I am familiar.

At the University of Minnesota in Minneapolis, grantees of the National Institute of Neurological Diseases and Blindness are conducting research in cerebral palsy, cerebral vascular disease, epilepsy, diabetes, eye disorders, certain muscular disorders, and a study of congenital tremors.

At the Minnesota War Memorial Blood Bank, there are studies on hereditary ataxia; and at the American Academy of Ophthalmology and Otolaryngology in Rochester, there are studies on uveitis, a blinding eye disease, and on the conservation of hearing.

NECESSITY FOR LARGER APPROPRIATION

Gentlemen, it is my hope that my remarks along with those of Dr. Merritt, Dr. Clifford, and Dr. Braley will further emphasize the need for the appropriation which we are recommending.

Only as you make funds available will the Institute be enabled to continue its present program, further round out its collaborative studies, move into new programs, and begin investigations in the field of infectious disorders of the nervous system—a provocative, untouched area in neurological research.

Here is a realistic program, and here are the trained men to activate it. To deny the money necessary for doing the job would be unfortunate. With your help, scientists must surely find the answers.

Thank you.

Senator HILL. You made the touchdown, Mrs. Johnson.

I only wish all America could have been here today sitting in to hear your testimony.

Mrs. JOHNSON. This digest by Dr. Bailey is tremendously important. I think lay people must begin to comprehend what the implication of this is. That is why it is so very easy for me to come and testify before committees, because I believe it completely.

Senator HILL. Any questions, Senator Potter?

Senator POTTER. No. I just want to emphasize again how interested I am in this. I know that Senator Hill is really a professional in these health problems, but as a lay member of the committee it is always a thrilling thing for me.

Senator HILL. This has been a magnificent presentation. You have had a wonderful team here today. You have done a beautiful job and you have been so helpful. You have made so many fine contributions. You have been so informative, so interesting, and so challenging.

We certainly want to thank you and express our deep appreciation.

Dr. MERRITT. We want to thank you for the opportunity of appearing here.

Senator HILL. The committee will stand in recess until 2 p. m. this afternoon.

(Thereupon, at 12 noon, the committee recessed, to reconvene at 2 p. m.)

AFTERNOON SESSION (2 P. M. THURSDAY, MAY 15, 1958)

ARTHRITIS AND METABOLIC DISEASES

STATEMENTS OF DR. WILLIAM PAUL HOLBROOK, DIRECTOR, SOUTHWESTERN CLINIC AND RESEARCH FOUNDATION, TUCSON, ARIZ.; DR. CLIFFORD BARBORKA, PRESIDENT, AMERICAN GASTROENTEROLOGY ASSOCIATION; AND DR. FRANCIS O. SCHMITT, INSTITUTE PROFESSOR, MASSACHUSETTS INSTITUTE OF TECHNOLOGY

GENERAL STATEMENT

Senator HILL. The committee will kindly come to order. We are delighted to have you gentlemen with us and we welcome you here and appreciate your presence.

Now, Dr. Holbrook, are you going to testify first. You may testify in any order that you see fit.

Dr. HOLBROOK. That is fine; Dr. Schmitt prefers that I talk before his paper, and I will be glad to.

Senator HILL. Whatever you gentlemen wish. You go ahead, Doctor.

Dr. HOLBROOK. Senator Hill and Senator Stennis and members of the committee, I have filed my written testimony and I am going to talk very briefly with you with the hopes of making 1 or 2 points that I hope we can all agree on.

Senator HILL. Your statement will appear in full in the record, Doctor.

(The statement referred to follows:)

PREPARED STATEMENT OF THE ACTIVITIES OF THE NATIONAL INSTITUTE OF ARTHRITIS AND METABOLIC DISEASES BY DR. PAUL HOLBROOK

Mr. Chairman and members of the committee, I am Dr. Paul Holbrook, of Tucson, Ariz. I am an internist in the private practice of medicine with a 30-year devotion to solving the problems of the crippling rheumatic diseases. I was associated with organizing the first medical society in this country devoted to rheumatic diseases, which was the American Rheumatism Association. I was later its president and was at that time in part responsible for organizing the Arthritis and Rheumatism Foundation and I became its first president. I also had the honor of testifying before this committee on behalf of the Arthritis and Rheumatism Foundation, urging the original establishment of the National Institute of Arthritis and Metabolic Diseases.

It is indeed a pleasure to appear before you today in support of the appropriation for the National Institute of Arthritis and Metabolic Diseases. I had the honor of serving as a member of the Advisory Council of this Institute from its inception in the fall of 1950 until June of 1953. It was a satisfying and enlightening experience. Being in the private practice of medicine I have watched with considerable interest the entry of Government into such a field. During my term on the Council I saw the closest possible cooperation develop between the American Rheumatism Association, the Arthritis and Rheumatism Foundation, and the National Institute of Arthritis and Metabolic Diseases.

In fact, the major accomplishments have been related to the intimate relationship and cooperation between the private and governmental agencies. Because of these interests I have continued to follow the activities of this Institute closely.

I should next like to discuss the magnitude of the problem of health assigned to this Institute. The National Institute of Arthritis and Metabolic Diseases deals largely with chronic diseases such as arthritis in its many forms, diabetes, metabolic disturbances, endocrine gland disfunctions, blood diseases, and disturbances of the stomach and intestinal tract such as ulcers. Perhaps these fail to achieve the drama of some of the killer diseases but these are the crippling and disabling ones. Almost 1 of every 2 doctor visits are because of 1 of these diseases assigned to this Institute. They are also, in general, the diseases about which little is known regarding specific causes or cures. Their cost to the country's economy is incalcuable. It is fairly estimated that the rheumatic diseases alone cost in excess of $1½ billion yearly. By the nature of these diseases it is quite clear that in this field research is more desperately needed than in almost any other field.

It has been my observation that this Institute operates effectively. The grants-in-aid program has been the finest and most efficient Government operation it has ever been my pleasure to observe. The fact that such support has been made available for research grants to the investigator in his laboratory attempting to enlarge our knowledge of the cause and nature of these diseases. as well as improved instruction programs in these problems in the medical school providing better training for our physicians and scientists, has in its entirety made this program especially significant.

I would, therefore, like to take this opportunity to commend you and the members of your committee, Senator Hill, for your sustained and vigorous interest and for the support which has permitted such a rewarding expansion of the activities of the National Institute of Arthritis and Metabolic Diseases. A review of the tremendous accomplishments resulting from that support is most striking and graifying. The field of rheumatology, which is my particular interest, offers many examples of the advances and new knowledge gained. Let me illustrate our dilemma, using rheumatoid arthritis as an example. Rheumatoid arthritis is the worst of the rheumatism cripplers. It is true that we do not as yet have a single specific cause, nor do we possess a single specific cure. but we have made tremendous advances in knowledge. Only a few years ago there was not even an accepted terminology so that physicians could understand what each other were writing about or talking about. The treatment of rheumatism was relegated to the spas and many thousands sought the "quack" remedies and quickly promised cures. We knew nothing of pathology, cellular chemistry, physiology, accurate diagnoses, and classifications. Today we know that rheumatoid arthritis, in its early stages, is completely reversible, at least temporarily, by a number of different agents. Sometimes an anesthetic, a period of starvation, or an emotional crisis may be followed by a dramatic improvement. We can completely reverse the disease to normal in its early stages with cortisone, cortisonelike substances, and ACTH in a very high percentage of cases, but we cannot hold the improvement permanently as yet. Interestingly enough, almost every woman with early rheumatoid arthritis makes a remarkable recovery during pregnancy, only to return to her swollen joints a few weeks or months after childbirth. Of course, as rheumatoid arthritis progresses it destroys the joints, so that crippling becomes permanent. We are uncovering much knowledge and I feel certain that with adequate support for research we shall be able to turn the key which prevents the development and progression of this crippling, progressive disease. Research studies are similarly going on in the other chronic diseases constituting this Institute's responsibility.

Although the Congress has increased the funds available to this Institute in recent years, these appropriations have not kept pace with the marked increases in worthwhile requests for this type of assistance. In fact, this financial deficiency is a matter of major concern this year. In research grants, for example, there will be about 6 million worth of approved requests at the forthcoming June Council meeting which cannot be supported unless the sum recently passed by the House of Representatives is substantially increased. Another six to seven million dollars in approvals are expected in November of this year and in March of 1959 which will be seeking support from this same appropriation. In other words, at an average of approximately $12,500 per grant, about 800 worthwhile projects in fundamental and applied aspects of arthritis, diabetes, and other metabolic diseases, gastroenterology, and the very

promising newly developing fields of physical biology must go unfinanced in that 12-month period. These unmet demands, gentlemen, are almost the equivalent of the highly productive program presently supported by this Institute and represents a major opportunity to bring new talents and new disciplines into our venture at a time when so very much can be gained.

In the training program of this Institute, as well as the grants-in-aid program, a similar situation exists. Although of relatively recent origin, the graduate training grants in arthritis, diabetes, metabolism, endocrinology, hematology, and gastroenterology have already had a marked influence in the institutions which have successfully applied for such support. The value of these grants becomes obvious from the increasing numbers of well-trained men leaving these centers to accept positions in other institutions where such needs exist. Of even greater importance, I believe, is the intangible benefit which these training grants have had at the recipient institutions upon the personnel at all echelons and without regard to departmental boundaries. The influence on students, investigators, teachers, hospital staffs, and local physicians to learn and do more about these afflictions, which were formerly relegated to the back closet of medicine, has been most rewarding and promises great advances in treatment for all the millions who suffer from these disease conditions. It is, in fact, the leavening yeast for the whole educational stimulus in these disease problems.

At present this Institute is able to support a total of 111 graduate training grants which are divided among the various responsibilities as follows: 35 in arthritis; 47 in diabetes; 11 in hematology; 12 in gastroenterology; 6 in metabolism. When one considers that there are more than 80 medical schools in the United States, and that there should be a training program in each of the categories enumerated for each school, he can readily appreciate the extent of the present deficiencies. These, of course, cannot be immediately corrected because of the scarcity of qualified individuals to direct the training programs. A great expansion of the current effort is clearly indicated and this expansion is possible if funds are made available because the older training centers are beginning to provide the necessary key personnel.

After careful consideration of the needs in the Institute's areas of responsibilities, and the estimates of approved requests for research and training money which can be anticipated during the coming year, the National Advisory Arthritis and Metabolic Diseases Council prepared the following recommended budget covering the programs of this Institute for fiscal year 1959:

Program	President's budget	House bill	Council recommendation
Research grants	$11,137,000	$11,475,000	$22,500,000
Graduate training grants	3,500,000	2,650,000	4,750,000
Research fellowships	257,000	257,000	350,000
Direct operations	6,698,000	6,710,000	7,198,000
Total	20,592,000	21,092,000	34,798,000

Having presented what I believe is a reasonable picture of the needs of the National Institute of Arthritis and Metabolic Diseases, I should like again to remind you of the magnitude of the problem of illness that rests with this Institute. The cost to the Nation of these diseases is incalculable and I would again remind you in relation to the Institute's relative importance in research, that almost one-half of the total physician visits in this country are concerned with the diseases within the purview of this Institute. I believe you will agree with me that the Council's recommendation for increases in research grants and the other items of the program are modest, indeed, in relation to the problem faced.

In conclusion I would like to emphasize two points. First is that these invaluable grants-in-aid programs very rightly and very strongly stress both aspects of our current needs in medicine. The support of the investigator at his laboratory bench aiding in our clear understanding of disease and its treatment, as well as of the physician striving for more adequate training in the complexities of modern medicine. Second, modern research and training is highly productive but it costs money, and the Federal Government must step up the pace of its support so that the scientists and teachers in our in-

stitutions will have the means to accomplish their scientific objectives and thereby improve the health of the entire population. Such appropriations will, I assure you, pay the highest dividends in the economy and health of our Nation.

RHEUMATISM AND ARTHRITIS

Dr. HOLBROOK. I am Dr. Paul Holbrook from Tucson, Ariz. I am an internist in the private practice of medicine with a 30-year-long devotion and interest in the chronic diseases.

The principal of my interests has been the crippling diseases of rheumatism and arthritis. I had the privilege of playing a part in the forming of the first medical society in the country which paid particular attention to rheumatism, the American Rheumatism Association. I was later its president and I then was assigned the chairman's responsibility of organizing and forming the Arthritis and Rheumatism Foundation, with which I am sure you gentlemen are familiar, and I was its first president.

Incidentally, I had the very great pleasure of appearing before this committee at the initial founding of this Institute, urging the founding of the National Institute of Arthritis and Metabolic Diseases.

Senator HILL. That has been several years ago.

Dr. HOLBROOK. Yes, that was several years ago. It was 1950.

Also, I had the honor of serving in the first Council of this Institute beginning in the fall of 1950 up until 1953. So much for my background.

I have been interested in chronic diseases and I have been interested in reheumatic diseases and have been interested in the problems with which this Institute is concerned. Now, being in the private practice of medicine, I have watched, with considerable interest, and I might say originally some concern, the Government in this field of medicine. I, however, had the opportunity of watching the development, in fact, I saw the marriage of the American Rheumatism Association, which represents the private practice of medicine in this country, the Arthritis and Rheumatism Foundation, which represents the raising of funds of private concerns, and the National Institute for Arthritis and Metabolic Diseases. I have never seen a more completely harmonious marriage and a more economically accomplished association than that of these three organizations, so that I have the feeling that this Institute warrants and deserves every effort that at least I and we can do to support it.

MAGNITUDE OF PROBLEMS

Now what is the magnitude of this Institute's problem? I think that is awfully important, that we understand that as we go along. As you know, this Institute has to do with rheumatism, with the crippling arthritis, with diabetes, with metabolic diseases, thyroid disturbances, glandular disturbances, diseases of the stomach and bowel, gastrointestinal problems, and ulcers.

It also has to do, in our last edition, with the biophysical sciences.

Now please note that these diseases for which this Institute is responsible represent, in general, the chronic diseases, the diseases about which we do not know the cause nor do we have a specific cure. They represent, in magnitude, about one-half of all the physicians' visits occurring in this country. Now just think about that, one-half.

Senator HILL. You mean one-half of the visits that the physicians make to the homes in this country?

Doctor HOLBROOK. Has to do with these diseases, that is correct, approximately, so that it is a vast neglected, relatively-unknown field from the standpoint of research in medicine.

COST OF CHRONIC DISEASES

Of course, as you know, the cost of these diseases is incalculable. That is, I have no idea how much all of these diseases cost the national economy. But it has been estimated, in the field I am especially interested in, the crippling rheumatism problems, that it costs probably $1½ billion a year. That alone costs that much. So how much all of these cost, I think, is anybody's guess. It is a terrific thing.

In view of what is going on in this Institute, it would take a very long time to describe all of it and I am only going to take about 3 minutes.

Senator HILL. You take your time.

Dr. HOLBROOK. I am not going to talk very long. I just want to say a few more things about this particular point. I think I could illustrate to you better, in a field of my own preference, what is happening. A few years ago, in the field of rheumatism, for instance, I do not think we could even understand each other because we did not know any names, the terminology was so badly confused, and nobody knew what the other fellow was writing about or what he was talking about.

PROGRESS IN COMBATING RHEUMATISM AND ARTHRITIS

There was no pathology, none; no physiology, no basic research going on at all. Now, in a relatively few years, a great deal has been learned. It is true we do not know the exact cause nor do we have a quick cure, but in just a few years this has happened. It was only a few short years ago that people sort of accepted rheumatism as the curse of God. One little woman in my office wheeled in a wheelchair. She is a doctor. She said, "I am sorry to trouble you; it is just the rheumatism." I said, "How long have you been in the wheelchair?" She said, "Fifteen years." So that nothing was done. Now we know a great deal about this. We have come to the place, let's say, in rheumatoid arthritis where we can now have some tools to open and close the door. An anesthetic, a shock, or anything may cause, for no reason we know of, a dramatic improvement. We can, with cortisone and cortisone-like substances, completely reverse this disease in its early stages so that the patient who is bedridden can get up and walk and be perfectly normal. Unfortunately, we can't maintain this yet.

An interesting thing is that nearly all women who have this disease and get pregnant have a complete remission. The joint swellings all go away, and they feel wonderful and feel normal. Now you can imagine what this has done to us in the hope of being able to open and close this door to complete remission. We know the answer is not so vary far away now because we are getting chemistry and cellular studies and we are comparing all of these various treatments and conditions that cause the disease to abate only temporarily.

Of course, if we don't do something about it, as the disease goes on, as you know, the joints are destroyed and complete crippling takes place. But we are near enough to see that we are close to a breakthrough.

Similar research is going on in diabetes, in gastro-intestional diseases, and in other diseases; but not enough, not nearly enough.

FUNDS NEEDED

Now, financially a few words and then I will quit. You know something about what has been appropriated by Congress in the past. They have increased their appropriations to this Institute, but right now in this year we have a critical situation financially. When the council meets in June, and incidentally, I am no longer of course on the council but I have asked for this information, we will be about $6 million behind and when the council meets again in November and in March we will be about another $6 million behind, so that for this coming fiscal year we are over $10 million out.

Senator HILL. This year?

Dr. HOLBROOK. That is assuming that the House bill appropriation is accepted as it is, which is about $21 million as you know.

Senator HILL. Excuse me, Doctor. Do you have the breakdown of the $10 million? How much for research grants, and how much for training? Is that in your statement?

Dr. HOLBROOK. I can give it to you. It is in my typewritten list there. The $10 million deficit forecast is for research. Training needs will be about $2 million over that presently allowed.

The research grants under the House bill were $11,475,000.

Senator HILL. That is on page 6 of the statement.

Dr. HOLBROOK. Page 5 on my statement, but 6 on yours is correct.

The council has gone all over this thing extremely carefully, and I have gone over the list and they have come up, I think, with a very conservative recommendation.

They are asking, as you can see here, for $22,500,000 for research instead of $11,475,000. That means for research alone, you can understand, and you see that training grants are also up modestly, research fellowships vary slightly and direct operations are about the same; so that the majority of this increase goes to research.

I believe this is an extremely conservative estimate. When I see the amount of money appropriated and when I study the problems that are going on in other projects of less magnitude, this is a rather small amount of money.

RESULTS OF LACK OF FUNDS

If something is not done to increase this Institute's appropriation this year there will be about 800 research projects that have been approved with high priority by the Council, averaging, we will say, about $12,500 apiece, which cannot be paid this year.

Now you say, "What can you do for $12,500?" That is the beautiful part about this program of grants-in-aid. Twelve thousand five hundred dollars goes to a little medical school or a big medical school or just one little department for a project. When you start this thing rolling in a medical school it draws unto itself other members. In

our own little setup in Arizona we have 6 or 8 departments at the university and do not even have a medical school. We spend altogether 10 or 50 times as much money and as much personal talent as is usually granted to a project. This is like a wave that spreads and multiplies in its influence on these projects.

I do not have very much else to say, except that I would like to remind you, in closing, of the magnitude of this Institute's problem. Almost one-half of the physician calls made for all of the diseases in the United States are made for just the diseases represented by this Institute. They are the chronic diseases. They are not dramatic as killers, but they cause misery and crippling.

Senator HILL. They cause a lot of suffering.

Dr. HOLBROOK. Yes, they cause a lot of suffering and the cost is incalculable.

ECONOMIC LOSS

Senator HILL. And there is a great economic loss.

Dr. HOLBROOK. There is a great economic loss, $1½ billion on rheumatism alone. We have no way of figuring out how much the total loss would be on the Institute's illnesses. I believe you will agree with me that this is a relatively small amount of money to appropriate for the health of the Nation, or at least let's say half of the Nation, in a field as important as this one is. I assure you that it will pay you the highest dividends in the health of this Nation, pay you more than anything I know of, the simple little research and grants-in-aid program and the training program. I recommend that to you and I congratulate you gentlemen on your stand in support of these programs in the past.

Senator HILL. That is certainly very fine, Doctor, very, very fine. Are there any questions, gentlemen?

PROGRESS IN TREATING DIABETES

Senator THYE. Dr. Holbrook, you made mention of the fact that we are closing in on the diabetic question.

Dr. HOLBROOK. And all of these problems. There has been a lot of research work on it.

Senator THYE. When you say "closing in," can you foresee the day when the person afflicted with diabetes can avoid using the needle and insulin?

Dr. HOLBROOK. I can tell you now, although diabetes is not my special hobby, I have very special interests in other fields.

Senator THYE. But you made mention of it.

Dr. HOLBROOK. Yes, sir; and I am glad to answer that question. Already, there are a large number of people who are no longer taking the needle with a mild diabetes but are getting along with the little oral tablets that you take as you take aspirin. That does not solve the problem yet, but it is a good advance over the use of the needle. I feel certain that when we understand what goes on from basic research in this disease, we will not only be able to do something much better than oral tablets, but we may be able to prevent the disease.

Senator THYE. That was the point of my next question. Are you coming closer to knowing what has taken place within the human body that causes a breakdown in the chemistry of that body?

Dr. HOLBROOK. We are coming very much closer to it. We are coming so close in some respects that we are able to grow in test tubes the cells that constitute certain organs of the body and study these cells all by themselves in a test tube and experiment with them just as we would with the pancreas in a human being, which we can't do, as you understand.

Senator THYE. Do you feel that you are short of funds in that particular field of research?

Dr. HOLBROOK. Very short of funds.

Senator THYE. How much money do you think should be added to that particular research?

Dr. HOLBROOK. I mentioned that I thought at least $10 million ought to be added to the present appropriation for research.

Senator THYE. That would be all research, whether it would be in that field or cancer or heart or mental disorder?

Dr. HOLBROOK. No. No. Cancer does not belong in this field. This has to do with arthritis, rheumatism, diabetes, stomach and bowel diseases, blood diseases, and the biophysical sciences.

Senator THYE. That is what I wanted to get clarified.

Dr. HOLBROOK. This constitutes about half of the medical problem of the country, just in this one Institute. And at the moment the House appropriation is about $11 million for research. I would conservatively and wholeheartedly recommend that $10 million be added to that, as I said before.

Senator THYE. That is all, Mr. Chairman.

FINANCING OF TUCSON, ARIZ., FOUNDATION

Senator HILL. Doctor, you are the director of the Southwestern Clinic and Research Foundation in Tucson, Ariz.?

Dr. HOLBROOK. That is correct.

Senator HILL. How is that foundation basically financed?

Dr. HOLBROOK. That foundation is financed by voluntary contributions.

Senator HILL. Voluntary contributions?

Dr. HOLBROOK. Yes, sir. That started in 1934, when I found that about 35 percent of my patients were preachers or priests or nurses. I never charged those people professionally, and finally I said, "Look, if you want to pay your bill, here is a research fund." So we formed a nonprofit corporation and they would donate something to the research fund as payment of their bill. That is the way it has been financed.

Senator HILL. You have been able to finance it that way?

Dr. HOLBROOK. Yes, sir. We have had a small grant from the Public Health Service.

Senator HILL. I understand that, but you could not rely on just that, not at all.

Dr. HOLBROOK. No.

Senator HILL. And in the early days, you did not get that grant from the Public Health Service, anyhow.

Dr. HOLBROOK. No. And we never had more than $10,000 from this grant. This foundation is financed wholly from private contributions with that exception.

Senator HILL. That is very fine. That is a tribute to you, sir, first and foremost, and a tribute to the people of Arizona.

Dr. HOLBROOK. Well, we think it is a happy combination of the private practice of medicine and the private donations of money for research, but we cannot get enough money that way for this thing nationwide.

Senator HILL. Well, that was a very fine statement, Doctor.

Now we will have Dr. Barborka. Do you want to file your statement for the record?

Dr. BARBORKA. Yes.

Senator HILL. The statement will be placed in the record at this point.

(The statement referred to follows:)

STATEMENT ON THE ACTIVITIES OF THE NATIONAL INSTITUTE OF ARTHRITIS AND METABOLIC DISEASES BY DR. CLIFFORD J. BARBORKA, NORTHWESTERN UNIVERSITY MEDICAL SCHOOL, CHICAGO, ILL.

Mr. Chairman and members of the committee, my name is Clifford J. Barborka, and I am a doctor of medicine, a graduate of the University of Chicago, Rush Medical College, a master of science in medicine from the University of Minnesota. I was a consulting physician for 12 years to the Mayo Clinic; am now professor of medicine at Northwestern University Medical School; chief of the gastroenterological clinics at Northwestern University Medical School and director of research in gastroenterological diseases; senior attending physician at Passavant Memorial Hospital; senior consultant in gastroenterology at the Veterans' Administration Research Hospital, Chicago; president of the American Gastroscopic Society; president of the American Gastroenterological Association; and president-elect of the staff of the Passavant Memorial Hospital, Chicago.

I wish to state that it was my pleasure to be the first gastroenterologist ever to have appeared before the House subcommittee in 1957, and I am honored to be the first gastroenterologist to have the privilege of appearing before a Senate subcommittee. After 1 year's efforts on behalf of gastroenterology in the National Institute of Arthritis and Metabolic Diseases, I appear before you to report on the progress that has been made and to call your attention to the tremendous needs of our field in that Institute. I wish to reiterate a part of my testimony of 1 year ago before the House committe at which time I stated that the total number of attended illnesses in the United States was in the neighborhood of 280 million, that the largest number of total attended illnesses was in the field of the circulatory diseases (some 55 million), but that the second highest number of attended illnesses (some 40 million) were diseases of the digestive system. Recognizing that diseases of the digestive system are No. 2 from the standpoint of attended illnesses in this country, and contrasting the fact that research grants and support, both governmental and nongovernmental, in the field of gastroenterology have been only slightly more than 1 percent of the total allocations for total research in medicine, I think the committee can recognize the deficiency in support of gastroenterology. In fairness to the support of the Institute of Arthritis and Metabolic Diseases, I should mention that all treatments required by the public, those diseases that fall within the special fields that are covered by the Institute add up to some 120 million as compared with the total of all other disease conditions of 280 million. This emphasizes the large proportionate responsibility towards attended illnesses in the fields covered by the Institute of Arthritis and Metabolic Diseases, not taking into account the new field of physical biology.

I think ofttimes the lack of drama and great public appeal in the field of gastroenterology as compared with cancer, heart disease, etc., is one of the reasons that the public is not aware of the great morbidity, the loss to industry in hours of work, from the handicap of persons who are sick and even inefficient when they do attempt to work, from diseases of the digestive system. I do think most laymen are aware of the distress from peptic ulcer but I am not certain that most realize that 10 percent of the world's population have, or will have in the future, or have had in the past, an active peptic ulcer. I am sure the laymen are aware of many digestive disturbances such as gallbladder disease, liver disease, with their associated gas, bloating, distention, and colics, as well as the various forms of diarrhea and the dysenteries. Nevertheless, these and many other conditions of the digestive system still growl along with-

out great dramatic appeal to the public for support in their study, such as the American Heart Association, the American Cancer Society, the March of Dimes, and others receive.

We, in our specialty, have recognized for many years that the field of gastroenterology has been most inadequately represented in our profession by competently trained individuals and sufficient research. Research, of course, is of little value if there are not adequately trained people to carry it on, people who are capable of utilizing research funds in a really productive way. I should like to point out briefly another very important problem. In this country there are 84 medical schools. In the past year great hope and interest have developed as a result of the few training grants that have been given to awaken and support legitimate areas of gastroenterology throughout our university medical schools. However, only 12 of the 84 medical schools have been given help this past year for training grants in gastroenterology. It is only fair for this committee to ask what has been accomplished in gastroenterology during the past year. May I say that never before in our field has the opportunity presented itself to document advances that will lead to the alleviation of tremendous millions of sufferers in diseases of the digestive system. I should like to give you a few examples of progress made the past year. First, in the studies of the mechanism of pain in peptic ulcers, we finally have been able to devise a technical instrumentation which we call simultaneous fluorocinematography and intraluminal pressure measurements in the study of the gastrointestinal tract from mouth to rectum. Open lumen tubes are placed at various levels in the intestinal tract so that the pressure reactions of the individual can be transmitted through electrical transducers and measured just as one measures the function of the heart by the electrocardiogram. At the same time, these measurements are being taken from the intestinal tract, we also transmit from a fluoroscope, not only occasionally and intermittently, as in the past, but continuously, and for as long as 20 consecutive minutes, recordings which are transmitted by the X-ray fluoroscope through television machines so that there is no danger of radiation effect on the patient. This is a great step forward in the basic understanding of various diseases of the intestinal tract.

Another fascinating technical procedure now being worked on is the recording of intraluminal gastrointestinal pressures by having the patient swallow a radiotelemetering capsule. This capsule is an indigestible, pressure-sensitive instrument which permits permanent recording of intraluminal pressures of the stomach, small intestine, and colon without any connecting wires or tubes. The capsule is a rigid plastic cylinder 3 centimeters long and 1 centimeter in diameter. It contains a replaceable battery, a frequency modulation transistor radio transmitter and a pressure-sensitive diaphragm. Intraluminal pressure on the diaphragm is transmitted by means of radio signals to a frequency modulation receiver and the pressures are displayed constantly on an oscilloscope and recorded permanently on paper, again very similar to the recording in electrocardiography. Thus, this added method offers particular advantage for research and study of functional disorders of the small and large bowel. A great deal of protection is being afforded patients due to research that has shown the dangers of the use of certain drugs for hypertension and drugs for arthritis that may have bad side effects on the gastrointestinal tract by the stimulation of gastric acid secretion, thus precipitating or aggravating peptic ulcers of the stomach even to the point of hemorrhage. These observations have alerted the profession to greater care in the usage of these drugs.

In the past, as another example of our research developments this past year, we have passed instruments to look at the lining of the esophagus. We have passed instruments called gastroscopes into the stomach. We have passed instruments into the abdomen, called peritonoscopy procedures, and we have visualized in many of these instances various conditions, including cancer, long before they could become apparent through the routine technics of diagnostic examinations. But this was a glance without the ability to document and photograph in color exactly what we see. We now have devised ingenious machines for simultaneous color photography with electronic-flash devices which allow us to take photographs of the various lesions in these areas. Thus, rather than having to depend upon the interpretation by one man of what he has seen, this method allows everyone to see and know what was seen. Likewise, we are developing from fiber optics what are called gastrofibroscopes; these are not rigid but can be passed on down into the small bowel from the mouth without serious inconvenience to the patient, and transmit from there light and vision around curves and through knots (literally) without distorting the vision. Likewise, the

advances in safely taking suction biopsies from the surfaces of the intestinal tract from mouth to rectum will aid us in the early recognition of many serious lesions which cannot be seen by the ordinary diagnostic technics.

With the development of radioisotopes and the ability to label various substances, such as iodine-labeled fat, I^{131} labeled albumin, and other isotopically labeled substances, we are now in a position for the first time to start, combined with cytological studies and the various suction biopsies, the tremendously needed observations on the malabsorption syndrome of twenty-eight-odd feet of small bowel, which is the vital source of absorption and utilization of the nutriment necessary for life and its vital processes. This has never been accomplished before.

I mention a few of these astonishing advances in the past year to call your attention to the great need in our field for additional training grants to enable us to provide adequately trained people to administer effectively the appropriated funds for research. Research is ordinarily a very time-consuming process. You well realize there are no medical miracles that are apt to happen suddenly. In research we are faced with the task of probing and testing, with many disappointments. At times it seems exceedingly tedious and discouraging, but only by tenacity and the determination of competently trained, research-minded people can we ultimately find the way to the successful extension of life and the cause of the various disease problems yet unsolved.

In our particular field we are, indeed, on the crest of a gigantic wave of interest due to the already remarkable research devices that have come to fruition in just the past year. I wish to call your attention also to the fact that last year I left a preliminary program for the First World Congress of Gastroenterology, which will be held in May 1958, here in Washington. This is the first meeting ever held in our field for all the national societies of gastroenterology from all the countries of the world. The meeting will begin May 24, and conclude May 31. There will be over 250 world leaders from 49 countries who have been planning their presentation for this congress for nearly 2 years. We, of the American Gastroenterological Association, have worked on this congress since 1955, when we were first asked to sponsor and act as host of such a meeting. We feel this will be one of the greatest meetings of its kind in history and I should like to say briefly that among the various presentations we are devoting an entire half day to research and education of the gastroenterologic internist, with particular emphasis on the future in this field of medicine. The outstanding leaders in research and gastroenterologic training in the world will present material as part of the symposium. Among the guest speakers will be Dr. Howard M. Kline, Chief of the Education and Training Branch of the Department of Health, Education, and Welfare, Public Health Service, discussing the role of Federal agencies in strengthening the training programs; Dr. Detler Bronk, president of the Rockefeller Institute for Medical Research, who will discuss the role of the privately endowed foundation in the training of physicians. I should like this committee to know that we are very grateful for the interest and help we have received from the Institute of Arthritis and Metabolic Diseases.

It now appears that, although Sputnik I was a physical experiment, Sputnik II was an attempted physiological one. These recent advances in long-range rocketry, culminating in the successful launching of three earth satellites, have precipitated another wave of anxiety about the adequacy of recruitment programs for the physical sciences and engineering. At the same time, there is real concern lest education in these fields, which relate so directly to the development of earth satellites, should receive undue emphasis while other areas are left to lag behind. Research and education in the medical sciences should be expanded as vigorously as other scientific and technical areas if our country is to progress in scientific developments. United States scientists returning from Russia have commented informally on the emphasis that the U. S. S. R. has placed on the physical sciences and engineering technology, while it has been their observation that the medical sciences have received far less attention. If it is true that Russia has neglected the medical sciences as well as the humanities and social sciences, in the headlong pace she has set in technology, such neglect can be only to her disadvantage in the long run, or to that of any country placing undue emphasis on the physical sciences at the expense of the physiological ones. In the competition for world progress and prestige, the United States can well find in this situation an opportunity for new scientific achievement and leadership. The launching of two earth satellites by Russia, as well as our own

Explorer, has precipitated a great deal of discussion regarding existing or potential shortages of scientific manpower. In the vigorous programs of recruitment of manpower for the physical sciences and engineering which is ahead it is important that a balance of power be maintained in all areas of higher research and education, including, certainly, the medical sciences. It can, thus, be concluded that Sputnik Mark II should be a warning and a challenge. Medical research in the United States should be pursued as vigorously and intensely as in other sciences. The need for a flow of promising and properly trained young scientists into medicine, and for the funds to support their research, is more pressing now than ever before in the entire history of the whole field of medicine, to say nothing of gastroenterology itself.

As we review the President's proposed budget of $14,087,000 for the grants programs of the Institute of Arthritis and Metabolic Diseases and the Council's recommendation of $27,600,000, although this amount is approximately double the current year's appropriation as well as the President's budget for 1959, realizing the dismaying picture of approved but unpaid grant applications in the Institute, and, particularly, the great needs in our field of gastroenterology which has bad but 1 active year in the Institute, I agree with the Council's budget recommendation, but would emphasize the training grant portion of the budget which in gastroenterology alone could use $1,500,000.

Although it is true that my specialty and current major interest as an internist lies in the field of gastroenterology, as you gentlemen know, I would like to direct your attention to the diabetes program of the National Institute of Arthritis and Metabolic Diseases.

During the 12 years that I was associated with the Mayo Clinic, much of my time was spent on diabetes, working with Dr. Russell M. Wilder, eminent diabetes specialist. He later became president of the American Diabetes Association, and was for 2 years the director of the National Institute of Arthritis and Metabolic Diseases. I am familiar with the problems of diabetes research, and I know that, through the National Institute of Arthritis and Metabolic Diseases, work of great importance and value has been achieved in recent years, supported by funds appropriated by Congress.

The Institute has been able, with steadily increasing appropriations for this purpose, to support a rapidly developing amount of research in diabetes, and in the broad areas of metabolism related to diabetes studies, in institutions throughout the country. During the past 3 years, it has built up a real diabetes program, ranging from a total of $808,000 in 1955 to an estimated $4,400,000 in 1958. But still there is a large backlog of approved research projects which cannot be paid. Although interest in this field of research is at a new high and still building, only 47 out of the more than 80 medical schools in this country have active diabetes-training programs. These facts appear to me to point up the necessity of added support in this area of scientific investigation, for here are complex problems, involving processes of metabolism which, in spite of many significant advances and many small successes, we know much too little. In order to capitalize upon the gains already made, it is essential that we do not now lose momentum.

Just 2 weeks ago in Atlantic City, the Institute and the American Diabetes Association jointly sponsored the first national conference on training and research in diabetes, which was attended by many of the leading scientists, clinicians, and educators in this country who are concerned with the problems involved in the conduct of research projects and the training of scientists and physicians in the diabetes field. This conference was called to provide an opportunity, or forum, if you will, for the exchange of information concerning the status of research and training in diabetes—the first such meeting ever held in this country. It is too early yet to properly evaluate the results of this meeting, but it can be said that it most certainly did provide definite data by which the success of the training grants program of the Institute could be measured. Diabetes training program directors from nearly 50 medical schools compared notes, exchanged information and ideas, and testified uniformly to the effectiveness of the training grants program in not only providing more highly trained research scientists and physicians skilled in treatment, but in stimulating research in diabetes and related fields.

A highlight of this diabetes conference was an address by Dr. Charles H. Best, codiscoverer (with Dr. Frederick G. Banting) of insulin. Dr. Best is now director of the Banting and Best Department of Medical Research at the University of Toronto, Canada. In his talk, Dr. Best chose to look into the future. Based upon the solid foundation of present-day achievements in diabetes re-

search, he predicted that eventually insulin will be made synthetically, that the antidiabetic activity of the hormone may reside in something less than the whole insulin molecule, and that a method will be developed whereby this synthetic insulin or insulin fraction can be adapted for oral medication. He looks forward to the day, too, when insulin can be placed in a sort of storage depot and released in the body automatically, exactly in proportion to the need, thus obtaining perfect control. He also predicted the development of small mechanical devices which, safe and reliable, can deliver insulin into the subcutaneous tissue at a fixed rate, with an arrangement whereby the amount delivered might be increased when required—after each meal, for example.

Looking forward to improvements in the treatment of diabetes, Dr. Best forecast that in the future we shall be able, by chemical means, to produce and maintain any desired level of control of the thyroid, pituitary, adrenocortical, and glucagonogenic secretions which might be desired, and that we'll be able to stimulate the beta cells to increase their size and rate of insulin production in cases in which tests have indicated that stimulation, rather than rest is indicated. In these cases, he declared, the increased rate of natural insulin production will effect a cure.

Again, looking forward about 25 years, Dr. Best expects that physicians, armed with much more sensitive diagnostic procedures than are now available, will be able to detect incipient cases of diabetes and to prevent or delay the development of most of them by suitable adjustments in the dietary and physiological controls of metabolic balances.

Some of these predictions may seem, now, to be a bit fantastic, but you may be assured that they are, as I said earlier, based upon definite possibilities inherent in present-day research work. The abiilty to control diabetes, as well as we can today seemed even more unattainable prior to the discovery of insulin in 1921. Back in 1921 the diagnosis of diabetes in a young person was the equivalent of a death sentence. You might be interested to know, in this connection, that the first patient to receive insulin made in the United States is still living. He is Charles E. Cowan, now 90 years of age, who, in May 1922 received this first United States insulin injection from Dr. William D. Sansum in Santa Barbara, Calif., at the Potter Metabolic Clinic. This was only a short time after the first recorded insulin injection was given to Leonard Thompson in Canada, following close upon its discovery by Drs. Banting and Best. Mr. Cowan and his wife, now living in Anaheim, Calif., celebrated their 65th wedding anniversary on April 12, 1957, and the very next month he celebrated his 35th year of insulin therapy. Mr. Cowan's story is told in full in an article entitled "The Miraculous Life of Charles E. Cowan" which appears in the May-June, 1958 issue of The ADA Forecast, a magazine for diabetics published by the American Diabetes Association.

Since that first insulin injection in the United States in 1922 great progress has been made, both in the treatment and control of diabetes and in our understanding of the underlying metabolic processes. But still we can only control it fairly successfully. The means for prevention and cure still elude us.

No report to you on diabetes would be complete, of course, without mention of what is, without doubt, the most significant development of the past year—the appearance on the market of the new oral antidiabetic drug, tolbutamide, better known by its trade name, Orinase. This new drug, after 2 years of intensive laboratory and clinical testing, is now available in practically every drugstore in the land, upon prescription. It became available to the public in June 1957, and, since that time, literally thousands of diabetics, with the advice of their physicians, have been able to throw away their syringes and take their medicine by mouth, a much more convenient method, I can assure you. Tests have shown that tolbutamide works effectively and apparently safely to lower the level of sugar in the blood and urine of many diabetics. How it works—the specific manner in which it obtains its effects still is not known, however. Also, it has not been in common use long enough to determine whether its long-term effects might possibly not be entirely satisfactory. Of course, it is not effective in all cases, and cannot replace insulin in many, especially those which are of the "juvenile" or "brittle" type found in younger persons.

Because it is most important to learn more, much more, not only about tolbutamide, but about other oral antidiabetic drugs which have been or will be developed, in a prompt, authoritative, and organized manner, it has been proposed that the National Institute of Arthritis and Metabolic Diseases should,

in some manner, initiate a program which would make it possible to achieve three very necessary objectives:

1. Test them in patients over long periods of time, in direct comparison with patients treated with insulin. This is important, particularly in relation to the complications of diabetes, which usually arise rather late in the course of the disease. Half of all deaths attributed to diabetes are caused by the complications rather than by the disease itself. Long-term studies, too, are necessary in connection with the development of side effects due to long-continued use. Diabetes is a lifetime disease, and medication in most cases must be continued throughout life if the disease is to be controlled. Toxic effects not apparent in short-term use may develop insidiously, cumulating through the years.

2. Test them in large groups of patients. This is necessary so that coordinated studies and comparisons can be made. Clinical testing to date has been accomplished largely by numbers of individual investigators using comparatively small groups of patients. Although a large number of tests have been made by large numbers of physicians on numerous small groups, there is much yet to be learned which can best be accomplished by a coordinated team approach, using standard criteria in several large groups of test patients.

3. Determine how new drugs work. Here, too, a coordinated laboratory and clinical program is necessary to achieve in the shortest possible time a vital goal. In spite of the extensive testing already conducted in connection with tolbutamide by many scientists and physicians in many locations, there is no agreement on how this drug works to achieve its effects.

What is needed is a large population of diabetic patients which can be organized under a coordinated testing program. The Institute has had conversations with several organizations, including the Veterans' Administration, concerning the possibility that they might be able to provide the required diabetic patient populations, and might be able, provided funds were available, to work with the Institute on such a project.

It has been suggested that the details could be worked out and the programs initiated by the Institute with the Veterans' Administration and other organizations on a contract basis. It is estimated that with approximately $500,000 a really effective program for the thorough testing of antidiabetic drugs could be promptly launched. I would like to recommend that this amount be provided to the Institute for contract work so that this important project could get underway as soon as possible.

I am particularly conscious of the fact that this Institute's research and training programs are expected to cover an ever-broadening area in the field of metabolic diseases, many aspects of which have been comparatively neglected in the past. As burgeoning interest and needs in fields such as gastroenterology and physical biology demand attention and funds for proper support of increasing research and training programs, it becomes evident that the longer established fields of activity in arthritis and diabetes may suffer if additional funds are not provided for this Institute. If the rapidly developing and highly promising activities in the field of physical biology are to be supported without sacrifice to already established and very productive research and training programs in diabetes, arthritis, gastroenterology, and the highly valuable basic studies in metabolism, there must be a substantial increase in the funds appropriated by Congress.

I would like to repeat and reemphasize what I said in testimony before the House subcommittee concerning the need for more funds for this Institute. As it stands, the Institute's budget request for $14,087,000 for research grants and training has been increased by $500,000 in the House to a total of $14,587,000 but this increase provides only for added activities in gastroenterology. I must say in conclusion that the proposed budget suggested by the National Advisory Arthritis and Metabolic Diseases Council, providing a total for extramural programs of $27,600,000, is no more than adequate for the amazingly big job which must be done by this Institute in fields that are fertile and promising.

Thank you, Mr. Chairman, and gentlemen of the committee.

General Statement

Dr. Barborka. Mr. Chairman and members of the committee, my name is Clifford J. Barborka and I am a doctor of medicine, a graduate of the University of Chicago, Rush Medical College, a master of science in medicine from the University of Minnesota. I was a con-

sulting physician for 12 years to the Mayo Clinic; am now professor of medicine at Northwestern University Medical School; chief of the gastroenterological clinics at Northwestern University Medical School and director of research in gastroenterological diseases; senior attending physician at Passavant Memorial Hospital; senior consultant in gastroenterology at the Veterans' Administration Research Hospital, Chicago; president of the American Gastroscopic Society; president of the American Gastroenterological Association; and president-elect of the staff of the Passavant Memorial Hospital, Chicago.

I wish to state, if I may encroach on your time, that it was my pleasure and privilege to be the first gastroenterologist ever to appear before the House committee in 1957. I testified also this year and I am honored to be the first gastroenterologist to have been given the privilege to testify before a Senate committee.

WORK IN FIELD OF GASTROENTEROLOGY

I think it is only natural that your committee is desirous of having some conception of the activities in the field of gastroenterology. We have had gastroenterology in this Institute now only 1 year. But I do think you would like to know what 1 year's effort has consummated in gastroenterology in this Institute. So I am happy to report the progress in this field which we have made and to call your attention, as has Dr. Holbrook, to the peculiar and tremendous needs of our field in that Institute.

At this time I should like to reiterate some of my testimony of 1 year ago before the House committee as to the total number of attended illnesses in the United States.

Senator HILL. Excuse me, Doctor, but do not hesitate to reiterate.

INCIDENCE OF DIGESTIVE DISORDERS

Dr. BARBORKA. Thank you. Those illnesses were surveyed a year ago and I was so happy to hear Dr. Holbrook, who likewise must have been surveying this, bring out the fact that in the United States in the past year there were in the neighborhood of 280 million calls upon medicine and the largest number of total attended illnesses was in the field of circulatory diseases, some 55 million, and the second highest number of attended illnesses, some 40 mililon, were diseases of the digestive tract. Recognizing that diseases of the digestive system are No. 2 from the standpoint of attended illnesses in this country, and contrasting the fact that research grants and support, both governmental and nongovernmental, in the field of gastroenterology have been only slightly more than 1 percent of the total allocations for total research in medicine, I think the committee can recognize the deficiency in support of gastroenterology. In fairness to the support that the National Institute of Arthritis and Metabolic Diseases has given, I should mention that all treatments required by the public, those diseases that fall within the special fields that are covered by the Institute, add up to some 120 million as compared with the total of all other disease conditions of 280 million.

That, statistically, is approximately what Dr. Holbrook has testified to; and not having seen Dr. Holbrook before today I was very

happy to see that he has been studying that field carefully. This emphasizes the large proportionate responsibility toward attended illnesses in the fields covered by the National Institute of Arthritis and Metabolic Diseases, not taking into account the new field of physical biology, which Dr. Schmitt will talk to you about.

AWARENESS OF DISEASE MORBIDITY

I think ofttimes the lack of drama and great public appeal in the field of gastroenterology as compared with cancer, heart disease, et cetera, is one of the reasons that the public is not aware of the great morbidity, the loss to industry in hours of work, from the handicapped persons who are sick and even inefficient when they do attend work, from diseases of the digestive system. I do think most laymen are aware of the distress from peptic ulcer but I am not certain that they realize that 10 percent of the world's population have, or will have in the future, or have had in the past, an active peptic ulcer, which is one small field of gastroenterology. I am sure laymen are aware of the many digestive disturbances such as gall bladder disease, liver disease, with their associated gas, bloating, distention and colics, as well as the various forms of diarrhea and the dysenteries.

Nevertheless, these and many other conditions of the digestive system still growl along without great dramatic appeal to the public for support in their study, such as the American Heart Association, the American Cancer Society, the March of Dimes, and others receive.

Senator HILL. Those things dramatize themselves.

Dr. BARBORKA. Indeed, you are quite right. Of course, our President did dramatize our field comparatively recently, ileitis being one of the phases of our field, which I know you are all familiar with, but I assume that very few people knew what the term "ileitis" meant.

FIELD INADEQUATELY REPRESENTED

We, in our specialty, have recognized for many years that the field of gastroenterology has been most inadequately represented in our profession by competently trained individuals and sufficient research. Research, of course, is of little value if there are not adequately trained people to carry it on, people who are capable of utilizing research funds in a really productive way. I should like to point our briefly another very important problem. In this country there are 84 medical schools. In the past year great hope and interest have developed as a result of the few training grants that have been given to awaken and support legitimate areas of gastroenterology throughout our university medical schools. However, only 12 of the 84 medical schools have been given help this year for training grants in gastroenterology.

Senator HILL. Only 12?

Dr. BARBORKA. Only 12 out of 84 medical schools. It is only fair for this committee to ask, and this is only 1 year's effort, what has been accomplished in gastroenterology during the past year. May I say, and I am happy to say, that never before in our field has the opportunity presented itself to document advances that will lead to the alleviation of millions of sufferers in diseases of the digestive system. I should like to give you a few examples of progress made this past year.

PROGRESS IN TECHNICAL INSTRUMENTATION

First, in the studies of the mechanism of pain in peptic ulcers, we finally have been able to devise a technical instrumentation which we call simultaneous fluorocinematography and intraluminal pressure measurements in the study of the gastrointestinal tract from mouth to rectum.

Open lumen tubes are placed at various levels in the intestinal tract so that the pressure reactions of the individual can be transmitted through electrical transducers and measured just as one measures the function of the heart by the electrocardiogram. At the same time these measurements are being taken from the intestinal tract, we also transmit from a fluoroscope, not only occasionally and intermittently, as in the past, but continuously, and for as long as 20 consecutive minutes, recordings which are transmitted by the X-ray fluoroscope through television machines so that there is no danger of radiation effect on the patient. This is a great step forward in the basic understanding of various diseases of the intestinal tract.

RADIOTELEMETERING CAPSULE

Another fascinating technical procedure now being worked on is the recording of intraluminal gastrointestinal pressures by having the patient swallow a radiotelemetering capsule. This capsule is an indigestible, pressure-sensitive instrument which permits permanent recording of intraluminal pressures of the stomach, small intestine and colon without any connecting wires or tubes.

The capsule is a ragid plastic cylinder three centimeters long and one centimeter in diameter. It contains a replaceable battery, a frequency modulation transistor radio transmitter and a pressure-sensitive diaphragm. Intraluminal pressure on the diaphragm is transmitted by means of radio signals to a frequency modulation receiver and the pressures are displayed constantly on an oscilloscope and recorded permanently on paper, again very smilar to the recording in electrocardiography. Thus, this added method offers particular advantage for research and study of functional disorders of the small and large bowel. I may be mistaken, and Doctor Schmitt could verify it, that this is a fairly typical application of physical biology to medicine.

Doctor SCHMITT. Yes.

Senator HILL. How long have you had this now?

Doctor BARBORKA. We have been working with the fluorocinematography for a year and a half and intraluminal pressure for 8 years.

Doctor Quigley at Memphis, the University of Tennessee, worked 12 years with dogs on this principle before we applied it to humans.

Senator HILL. At the end of 12 years?

Doctor BARBORKA. At the end of 12 years he was convinced that this technique was far more accurate in documenting these factors than the practice of installing balloons in the gasterointestinal tract which themselves are mechanical factors that would confuse the interpretation of pressure reaction. They might stimulate the pressure themselves as you distend them. This technique is the first work to alter our clinical application of that principle. Now the telemetric capsule is comparatively recent. I would say this has existed now probably a year and a half as compared to the other technique.

Senator HILL. Was this capsule finally developed by you there at Northwestern?

Doctor BARBORKA. No. What I mentioned first, the fluorocinematography and intraluminal pressure, we did develop.

Senator HILL. You did develop that?

Doctor BARBORKA. Yes. Doctor Farrar and Bernstein developed the other technique, and both techniques are to be presented at our world congress to be held in Washington within 10 days and I do want to speak about that a little later to you.

Senator HILL. Where does Doctor Farrar do his work?

Doctor BARBORKA. Doctor Farrar has done most of his work in New York.

Senator HILL. In New York?

Doctor BARBORKA. Cornell.

Senator HILL. Cornell University?

Doctor BARBORKA. Yes.

Senator HILL. All right, proceed.

USE OF DRUGS

Doctor BARBORKA. A great deal of protection is being afforded patients due to research that has shown the dangers of the use of certain drugs for hypertension and drugs for arthritis that may have bad side effects on the gastrointestinal tract by the stimulation of gastric acid secretion, thus precipitating or aggravating peptic ulcers of the stomach even to the point of hemorrhage. These observations have alerted the profession to greater care in the usage of these drugs.

In the past, as another example of our research developments this past year, we have passed instruments to look at the lining of the esophagus. We have passed instruments called gastroscopes into the stomach. We have passed instruments into the abdomen, called peritonoscopy procedures, and we have visualized in many of these instances various conditions, including cancer, long before they could become apparent through the routine techniques of diagnostic examinations.

Senator HILL. In other words, you get a chance to see them earlier, which is so important.

Doctor BARBORKA. Yes.

But this was a glance without the ability to document and photograph in color exactly what we see. We now have devised ingenious machines for simultaneous color photography with electronic flash devices which allow us to take photographs of the various lesions in color in these areas. Thus, rather than having to depend upon the interpretation by one man of what he has seen, this method allows everyone to see and know what was seen, as true documentary evidence.

Senator HILL. You can study that just as you study an X-ray plate?

Doctor BARBORKA. That is right. And it is good for teaching, as well. Likewise, we are developing from fiber optics what are called gastrofibroscopes; these are not rigid but can be passed on down into the small bowel from the mouth without serious inconvenience to the patient, and transmit from there light and vision around curves and through knots (literally) without distorting the vision. Like-

wise, the advances in safely taking suction biopsies from the surfaces of the intestinal tract from mouth to rectum will aid us in the early recognition of many serious lesions which cannot be seen by the ordinary diagnostic technics.

USE OF RADIOISOTOPES

With the development of radioisotopes and the ability to label various substances, such as iodine-labeled fat, I^{131} labeled albumin, and other isotopically-labeled substances, we are now in a position for the first time to start, combined with cytological studies and the various suction biopsies, the tremendously needed observations on the malabsorption syndrome of twenty-eight-odd feet of small bowel, about which we know very little now, and which is the vital source of absorption and utilization of the nutriment necessary for life and its vital processes. This has never been accomplished before.

NEED FOR ADDITIONAL TRAINING GRANTS

I mention a few of these astonishing advances in the past year to call your attention to the great need in our field for additional training grants to enable us to provide adequately trained people to administer effectively the appropriated funds for research. Research is ordinarily a very time-consuming process. You well realize there are no medical miracles that are apt to happen suddenly. In research we are faced with the task of probing and testing, with many disappointments. At times it seems exceedingly tedious and discouraging, but only by tenacity and the determination of competently trained, research-minded people can we ultimately find the way to the successful extension of life and the cause of the various disease problems yet unsolved.

RISING INTEREST IN FIELD

In our particular field we are, indeed, on the crest of a gigantic wave of interest due to the already remarkable research devices that have come to fruition in just the past year. I wish to call your attention also to the fact that last year I left a preliminary program for the first World Congress of Gastroenterology, which will be held in May 1958, here in Washington. This is the first meeting ever held in our field for all the national societies of gastroenterology from all the countries of the world. I was one of the central committee that started this work in 1955. The meeting will begin May 24 and conclude May 31. There will be over 250 world leaders from 49 countries.

Senator HILL. Forty-nine countries?

Dr. BARBORKA. Forty-nine countries, who are coming here to exchange ideas, and not haphazardly. We sent out requests 2 years ago to world leaders in the fields of various subjects and expect them to come and answer many, many questions on a symposium and then open it for panel discussion. In order to have a thorough exchange of information we have arranged for simultaneous translation in English, French, Spanish, and German. I would like to leave with the committee a preliminary program, if you have time to look at it.

I am sorry I cannot give you the final program. I have only one which has just arrived today.

Senator HILL. Thank you. That is going to be quite a landmark meeting.

Dr. BARBORKA. We think so.

MEETING OF AMERICAN GASTROENTEROLOGICAL ASSOCIATION

We, of the American Gastroenterological Association, have worked on this congress since 1955, when we were first asked to sponsor and act as host of such a meeting. We feel this will be one of the greatest meetings of its kind in history and I should like to say briefly that among the various presentations we are devoting an entire half-day to research and education of the gastroenterologic internist, with particular emphasis on the future of this field of medicine.

The outstanding leaders in research and gastroenterologic training in the world will present material as part of the symposium. Among the guest speakers will be Dr. Howard M. Kline, chief of the Education and Training Branch of the Department of Health, Education, and Welfare, Public Health Service, discussing the role of Federal agencies in strengthening the training programs; Dr. Detlev Bronk, president of the Rockefeller Institute for Medical Research, who will discuss the role of the privately endowed foundation in the training of physicians. I should like this committee to know that we are very grateful for the interest and help we have received from the National Institute of Arthritis and Metabolic Diseases.

Senator HILL. Dr. Bronk is a very able man and so is Dr. Kline. I know that both of them will have something important to say.

Dr. BARBORKA. That is right. We are very grateful they have consented to do this.

It now appears that, although Sputnik I was a physical experiment, Sputnik II was an attempted physiological one. And I am not quite familiar at this moment what Sputnik III is to evolve. These recent advances in long-range rocketry, culminating in the successful launching of many earth satellites, have precipitated another wave of anxiety about the adequacy of recruitment programs for the physical sciences and engineering. I would like to take a moment to give you my humble philosophy about this point. There is real concern lest education in these fields, which relate so directly to the development of earth satellites, should receive undue emphasis while other areas are left to lag behind.

NEED FOR EXPANDED EDUCATION AND RESEARCH

Research and education in the medical sciences should be expanded as vigorously as other scientific and technical areas if our country is to progress in scientific developments. United States scientists returning from Russia have commented informally on the emphasis that the U. S. S. R. has placed on the physical sciences and engineering technology, while it has been their observation that the medical sciences have received far less attention. If it is true that Russia has neglected the medical sciences, as well as the humanities and social sciences, in the headlong pace she has set in technology, such neglect can be only to her disadvantage in the long run, or to that of any

country placing undue emphasis on the physical sciences at the expense of the physiological ones. In the competition for world progress and prestige, the United States can well find in this situation an opportunity for new scientific achievement and leadership.' The launching of three earth satellites by Russia, as well as our own satellites, has precipitated a great deal of discussion regarding existing or potential shortages of scientific manpower.

MANPOWER RECRUITMENT

In the vigorous programs of recruitment of manpower for the physical sciences and engineering which are ahead, it is important that a balance of power be maintained in all areas of higher research and education, including, certainly, the medical sciences. It can, thus, be concluded that the various satellites should be a warning and a challenge. Medical research in the United States should be pursued as vigorously and intensely as in other sciences. The need for a flow of promising and properly trained young scientists into medicine, and for the funds to support their research, is more pressing now than ever before in the entire history of the whole field of medicine, to say nothing of gastroenterology itself.

As we review the President's proposed budget of $14,087,000 for the grants programs of the Institute of Arthritis and Metabolic Diseases and the Council's recommendation of $27,600,000, although this amount is approximately double the current year's appropriation as well as the President's budget for 1959, realizing the dismaying picture of approved but unpaid grant applications in the Institute, and particularly, the great needs in our field of gastroenterology which has had but 1 active year in the Institute, I agree with the Council's budget recommendation, but would emphasize the training grant portion of the budget which in gastroenterology alone needs $1,500,000.

Although it is true that my specialty and current major interest as an internist lies in the field of gastroenterology, as you gentlemen know, I would like to direct your attention to the diabetes program of the National Institute of Arthritis and Metabolic Diseases.

DIABETES RESEARCH

To qualify my ability to do this in part, I should state that during the 12 years that I was associated with the Mayo Clinic, much of my time was spent on diabetes, working with Dr. Russell M. Wilder, the eminent diabetes specialist. He later became president of the American Diabetes Association, and was for 2 years the Director of the National Institute of Arthritis and Metabolic Diseases. I am familiar with the problems of diabetes research, and I know that, through the National Institute of Arthritis and Metabolic Diseases, work of great importance and value has been achieved in recent years, supported by funds appropriated by Congress.

The Institute has been able, with steadily increasing appropriations for this purpose, to support a rapidly developing amount of research in diabetes, and in the broad areas of metabolism related to diabetes studies, in institutions throughout the country. During the past 3 years, it has built up a real diabetes program, ranging from a total of $808,000 in 1955 to an estimated $4,400,000 in 1958.

But still there is a large backlog of approved research projects which cannot be paid. Although interest in this field of research is at a new high and still building, only 47 out of the more than 80 medical schools in this country have active diabetes-training programs. These facts appear to me to point up the necessity of added support in this area of scientific investigation, for here are complex problems, involving processes of metabolism which, in spite of many significant advances and many "small successes," we know much too little. In order to capitalize upon the gains already made, it is essential that we do not now lose momentum.

Just 2 weeks ago in Atlantic City, the Institute and the American Diabetes Association jointly sponsored the first national conference on training and research in diabetes, which was attended by many of the leading scientists and physicians in the diabetes field. This conference was called to provide an opportunity, or forum, if you will, for the exchange of information concerning the status of research and training in diabetes—the first such meeting ever held in this country. It is too early yet to properly evaluate the results of this meeting, but it can be said that it most certainly did provide definite data by which the success of the training grants program of the institute could be measured. Diabetes-training program directors from nearly 50 medical schools, compared notes, exchanged information and ideas, and testified uniformly to the effectiveness of the training grants program in not only providing more highly trained research scientists and physicians skilled in treatment, but in stimulating research in diabetes and related fields.

A highlight of this diabetes conference was an address by Dr. Charles H. Best, codiscoverer (with Dr. Frederick G. Banting) of insulin. Dr. Best is now director of the Banting and Best department of medical research at the University of Toronto, Canada. In his talk, Dr. Best chose to look into the future. Based upon the solid foundation of present-day achievements in diabetes research, he predicted that eventually insulin will be made synthetically, that the antidiabetic activity of the hormone may reside in something less than the whole insulin molecule, and that a method will be developed whereby this synthetic insulin or insulin fraction can be adapted for oral medication.

Senator HILL. In other words, without a needle?

Doctor BARBORKA. Yes.

He looks forward to the day, too, when insulin can be placed in a sort of storage depot and released in the body automatically, exactly in proportion to the need, thus obtaining perfect control.

He also predicted the development of small mechanical devices which, safe and reliable, can deliver insulin into the subcutaneous tissue at a fixed rate, with an arrangement whereby the amount delivered might be increased when required—after each meal, for example.

ANTICIPATED PROGRESS

Looking forward to improvements in the treatment of diabetes, Dr. Best forecast that in the future we shall be able, by chemical means, to produce and maintain any desired level of control of the thyroid, pituitary, adrenocortical, and glucagonogenic secretions which might be desired, and that we'll be able to stimulate the beta

cells to increase their size and rate of insulin production in cases in which tests have indicated that stimulation, rather than rest is indicated. In these cases, he declared, the increased rate of natural insulin production will effect a cure.

Again, looking forward about 25 years, Dr. Best expects that physicians, armed with much more sensitive diagnostic procedures than are now available, will be able to detect incipient cases of diabetes and to prevent or delay the development of most of them by suitable adjustments in the dietary and physiological controls of metabolic balances.

I think our effort now, by means of glucose-tolerance tests, by observing only the fact that if the fasting blood sugar in any one of us should exceed 140 with no sugar in the urine, that if we subject ourselves to this test we can begin to detect diabetes or its susceptibility long before sugar is present in the urine; so this prediction makes sense on his part.

Some of these predictions may seem, now, to be a bit fantastic, but you may be assured that they are not and I can state very assuredly that in my early days, in my association with Dr. Woodyatt in Chicago, and that dates back to 1919, back in the preinsulin days when we were keeping our diabetics alive by feeding them thrice-cooked vegetables only, it is no more fantastic now when you compare the situation with those days to project this possible progress of Dr. Best.

Senator HILL. The progress they may make and have made.

Dr. BARBORKA. Exactly, sir.

Senator HILL. Incidentally, not to get into it too deeply, but you speak about thrice-cooked vegetables. Why was it they could continue to live with thrice-cooked vegetables but it was not possible to live with vegetables that were only cooked once?

Dr. BARBORKA. As a matter of fact, Mr. Chairman, they couldn't. They only existed a little longer by this means of feeding and did later die of deficiency disease. When you cook a vegetable in water you take out all of the vitamins and when you do that three times you are certain they are going to get nothing but hay which is without any nutritional value. They did die eventually but that was the only way we could keep them alive and delay the inevitable.

FIRST INSULIN THERAPY

You might be interested in knowing that the first patient to receive insulin made in the United States is still living. He is Charles E. Cowan, now 90 years of age, who, in May 1922, received this first United States insulin injection from Dr. William D. Sansum, in Santa Barbara, Calif., at the Potter Metabolic Clinic. This was only a short time after the first recorded insulin injection was given to Leonard Thompson in Canada, following close upon its discovery by Drs. Banting and Best.

Mr. Cowan and his wife, now living in Anaheim, Calif., celebrated their 65th wedding anniversary on April 12, 1957, and the very next month he celebrated his 35th year of insulin therapy.

Mr. Cowan's story is told in full in an article entitled "The Miraculous Life of Charles E. Cowan," which appears in the May–June issue, 1958, of The ADA Forecast, a magazine for diabetics published by the American Diabetes Association.

Since that first insulin injection in the United States in 1922 great progress has been made, both in the treatment and control of diabetes and in our understanding of the underlying metabolic processes. But still we can only control it fairly successfully. The means of prevention and cure still elude us.

ORAL ANTIDIABETIC DRUG

No report to you on diabetes would be complete, of course, without mention of what is, without doubt, the most significant development of the past year—the appearance on the market of the new oral antidiabetic drug, tolbutamide, better known by its trade name, Orinase.

This new drug, after 2 years of intensive laboratory and clinical testing, is now available in practically every drugstore in the land, upon prescription. It became available to the public in June 1957, and, since that time, literally thousands of diabetics, with the advice of their physicians, have been able to throw away their syringes and take their medicine by mouth, a much more convenient method, I can assure you. Tests have shown that tolbutamide works effectively and apparently safely to lower the level of sugar in the blood and urine of many diabetics.

How it works—the specific manner in which it obtains its effects still is not known, however. Also, it has not been in common use long enough to determine whether its long-term effects might possibly not be entirely satisfactory. Of course, it is not effective in all cases, and cannot replace insulin in many, especially those which are of the "juvenile" or "brittle" type found in younger persons.

Senator HILL. How was this discovered?

Dr. BARBORKA. I would say that it was discovered accidentally. My understanding is that it was used in tuberculosis, to begin with, and then people with tuberculosis who happened to have diabetes of a certain mild type noticed the sugar diminished and that was the impetus and side observation that led to the actual effort. As you know, there was another drug by another firm which was a little different that has been taken off the market because of the side effects that were very harmful.

Senator HILL. In the reaction and in other particulars.

Dr. BARBORKA. That is right.

OBJECTIVES OF PROPOSED PROGRAM

Because it is most important to learn more, much more, not only about tolbutamide but about other oral antidiabetic drugs which have been or will be developed, in a prompt, authoritative and organized manner, it has been proposed that the National Institute of Arthritis and Metabolic Diseases should, in some manner, initiate a program which would make it possible to achieve three very necessary objectives:

(1) Test them in patients over long periods of time, in direct comparison with patients treated with insulin. This is important, particularly in relation to the complications of diabetes, which usually arise rather late in the course of the disease. Half of all deaths attributed to diabetes are caused by the complications rather than by the disease itself. Long-term studies, too, are necessary in connection with the development of side effects due to long-continued use. Dia-

betes is a lifetime disease, and medication in most cases must be continued throughout life if the disease is to be controlled. Toxic effects not apparent in a short-term use may develop insidiously, cumulating through the years.

(2) Test them in large groups of patients. This is necessary so that coordinated studies and comparisons can be made. Clinical testing to date has been accomplished largely by numbers of individual investigators using comparatively small groups of patients. Although a large number of tests have been made by large numbers of physicians on numerous small groups, there is much yet to be learned which can best be accomplished by a coordinated team approach, using standard criteria in several large groups of test patients.

(3) Determine how new drugs work. Here, too, a coordinated laboratory and clinical program is necessary to achieve in the shortest possible time a vital goal. In spite of the extensive testing already conducted in connection with tolbutamide by many scientists and physicians in many locations, there is no agreement on how this drug works to achieve its effects.

What is needed is a large population of diabetic patients which can be organized under a coordinated testing program. The Institute has had conversations with several organizations, including the Veterans' Administration, concerning the possibility that they might be able to provide the required diabetic patient populations, and might be able, provided funds were available, to work with the Institute on such a project.

POSSIBLE COOPERATING AGENCIES

It has been suggested that the details could be worked out and the programs initiated by the Institute with the Veterans' Administration and other organizations on a contract basis. It is estimated that with approximately $500,000 a really effective program for the thorough testing of antidiabetic drugs could be promptly launched. I would like to recommend that this amount be provided to the Institute for contract work so that this important project could get underway as soon as possible.

I am particularly conscious of the fact that this Institute's research and training programs are expected to cover an ever-broadening area in the field of metabolic diseases, many aspects of which have been comparatively neglected in the past.

As burgeoning interest and needs in fields such as gastroenterology and physical biology demand attention and funds for proper support of increasing research and training programs, it becomes evident that the longer-established fields of activity in arthritis and diabetes may suffer if additional funds are not provided for this Institute.

If the rapidly developing and highly promising activities in the field of physical biology are to be supported without sacrifice to already-established and very productive research and training programs in diabetes, arthritis, gastroenterology, and the highly valuable basic studies in metabolism, there must be a substantial increase in the funds appropriated by Congress.

REPETITION OF FUNDS REQUEST

I would like to repeat and reemphasize what I said in testimony before the House subcommittee concerning the need for more funds for this Institute. As it stands, the Institute's budget request for $14,087,000 for research grants and training has been increased by $500,000 in the House to a total of $14,587,000, but this increase provides only for added activities in gastroenterology. I must say in conclusion that the proposed budget suggested by the National Advisory Arthritis and Metabolic Diseases Council, providing a total for extramural programs of $27,600,000, is no more than adequate for the amazingly big job which must be done by this Institute in fields that are fertile and promising.

I thank you for your indulgence in listening to so long a discussion, Mr. Chairman.

Senator HILL. Well, Doctor, we want to thank you for your very interesting statement. You not only presented a most interesting and informative statement, but I think you make us feel better and more secure in our desire to support you. You told us the story of what you gentlemen are doing and trying to do and of course the work that lies ahead.

I am sure my friend, Senator Stennis, who is a very distinguished member of the Armed Services Committee, has a very intimate insight into what the armed services are doing as to making use of metabolic technology in the development of weapons. Evidently, he has been impressed just as I have.

Now you gentlemen are seeking to make the maximum use of modern technology and all that modern technology offers and can offer to help in this field. The only difference actually lies in the fact that you come in and ask for only a very modest sum, just a few million dollars, but when we consider the other we are not talking of just a few million dollars but of quite a few billion dollars.

Dr. HOLBROOK. We just do not know how to ask for enough money, Senator.

Senator HILL. Well, I do not know about that, but we cannot help but be impressed with that thought. You think in terms of saving human lives. Of course, these other things are for the defense of our Nation, but what they really mean in the final analysis is that they are for destruction. I am very much impressed with what you gentlemen said this afternoon.

Are there any questions?

CONSTRUCTIVE USE OF TECHNOLOGY

Senator STENNIS. No, except I do want to reiterate your sentiments about the constructive use of technological developments and other scientific achievements. I hear too much of the other side in the other committee. But you gentlemen might be interested to know that last year for research and development to the armed services, and this is an argumentative figure now, but it cost somewhere between 4 and 5 billion dollars for all the services.

Of course, you know the satellite is just a small part. We just have booming bills this year for additional sums, you see.

I do not want to take up your time, but I do wish some of the other Members of the Senate, Mr. Chairman, could hear these gentlemen as they have testified here this afternoon. This is a good thing for the country as a whole.

May I ask one question about this diabetic treatment: This tablet, this new treatment, is just taken orally, is that right?

Dr. BARBORKA. Yes, orinase.

Senator STENNIS. Just about what is the percentage of these patients who are able to take that effectively?

Dr. BARBORKA. I would have to say a comparatively small percent. We cannot give it, for example, to a diabetic patient who requires a large amount of insulin. We cannot replace large doses of insulin with oral material, particularly in the juvenile type, and expect it to control the diabetes, but many diabetics today requiring 5, 8, or 10 units of insulin of the more benign type can dispense, at least by our present experience, with the needle by using this orally.

Senator STENNIS. You have hopes for extending this and you need experimental work anyway on a broad scale, extensive scale?

Dr. BARBORKA. That is right.

VALUE OF TRAINING GRANTS

Mr. Chairman, I do not know the attitude of the committee toward these training grant programs, but I cannot emphasize adequately their basic value. I noted the statistical comparison between moneys for research and moneys for training grants. The research money can go down the rathole if the training is not adequate. I cannot help but emphasize that to you.

Senator HILL. I am glad to hear you say that. I want to say that we had some splendid witnesses with us this morning. They were in the field of neurology and they emphasized that very thing. There are so many things that ought to be done, that should be done, that could be done, but we simply do not have the trained personnel to do these jobs. I am glad to hear you emphasize that, Doctor. I certainly am glad to hear you say that because that is important and, as was brought out this morning, not in any critical sense at all, but it has only been in very recent years that our medical schools have recognized, shall we say, the responsibility, not only of teaching what we now know, but of teaching men to find out that which we do not know.

Dr. BARBORKA. That is right.

Senator HILL. I am certainly glad you gentlemen emphasized that.

GENERAL STATEMENT

Senator HILL. Dr. Schmitt, we can now proceed with your statement.

Dr. SCHMITT. Mr. Chairman and members of the committee, my name is Francis O. Schmitt. I have a doctor of philosophy degree in basic medical science (physiology, biochemistry, anatomy) from Washington University, St. Louis. I was a professor of biology for many years, and in 1939 became head of Washington University's department of zoology. In 1941, at the invitation of President Carl T. Compton, I came to the Massachusetts Institute of Technology to head its department of biology and biological engineering, which is now simply called biology department.

In 1955 I was appointed institute professor. We are not a university. We are an institute. At Harvard, the position would be entitled "University Professor."

This appointment was intended to free me completely for advanced teaching and research and to permit operating across traditional lines of departmentalized disciplines. My research has for 30 years been concerned with basic biophysics and molecular biology. My competence, therefore, lies in the sciences basic to biomedical research, rather than in the clinical field. For 10 years I have been a trustee of the Massachusetts General Hospital, my chief concern and work there being with the hospital's research program.

HOSPITAL'S RESEARCH PROGRAM REPORT

Now, Mr. Chairman, I want first to thank you and your committee for the excellent work you have been doing and the consideration which you have given to medical research, both pure or, so to speak, basic, and applied, and I refer to a sentence in your committee report for fiscal year 1958, on health, education, and welfare:

With respect to the general evolution of this Institute, the committee has been particularly impressed by testimony indicating that if the principles and methods of physics can be merged with those of biology, research vistas of the utmost significance will be opened.

In view of the emerging significance of this relatively new area of physical biology, containing, but not limited to, the effects of radiation, the committee expects this Institute to take the lead in developing research in this field, both in its own laboratories and through grant support. Funds are provided for adequate extension of work in this field.

BIOPHYSICAL PROGRAM

Mr. Chairman, I am here to speak on behalf of the appropriation for the activities of the National Institute of Arthritis and Metabolic Diseases, for the reason that, as you have indicated, it is to take care of the biophysical program. I believe very heartily in what I want to say, Mr. Chairman, and, as I understand, mine will be the first public testimony in this field before your committee, and, therefore, I have prepared a fairly detailed statement which I will file with you here.

Senator HILL. Yes. That will appear in full in the record at this point.

(The statement referred to follows:)

STATEMENT ON THE ACTIVITIES OF THE NATIONAL INSTITUTE OF ARTHRITIS AND METABOLIC DISEASES BY DR. FRANCIS O. SCHMITT, MASSACHUSETTS INSTITUTE OF TECHNOLOGY, DEPARTMENT OF BIOLOGY, CAMBRIDGE, MASS.

Mr. Chairman and members of the committee, my name is Francis O. Schmitt. I have a doctor of philosophy degree in basic medical science (physiology, biochemistry, anatomy) from Washington University (St. Louis). I was a professor of biology for many years and in 1939 became head of Washington University's Department of Zoology. In 1941, at the invitation of President Karl T. Compton, I came to the Massachusetts Institute of Technology to head its Department of Biology and Biological Engineering (now called Biology Department). In 1955 I was appointed institute professor, an appointment intended to free me completely for advanced teaching and research and to permit operating across traditional lines of departmentalized disciplines. My research has for 30 years been concerned with basic biophysics and molecular biology. My competence therefore lies in the sciences basic to biomedical

research rather than in the clinical field. For 10 years I have been a trustee of the Massachusetts General Hospital, my chief concern there being with the hospital's research program. Since the establishment of the Study Section on Biophysics and Biophysical Chemistry of the National Institutes of Health 3 years ago, I have been its chairman. As I will explain later, this Study Section is sponsoring rather intensive programing activities in the field of the biophysical sciences. I am a member of the Council of the Biophysical Society and a past president of the Electron Microscope Society of America and also of the Society for the Study of Development and Growth. I have served on various committees of the National Research Council (National Academy of Sciences), such as those on the skeletal system, on cardiovascular disease, on burn and wound healing, and on its biology council.

I appear before you to speak on behalf of the appropriation for the activities of the National Institute of Arthritis and Metabolic Diseases and in particular to testify concerning the great opportunities now awaiting in the field of physical biology and biophysics. I wish most earnestly to call attention to the importance of basic research in the biophysical sciences in the attack on many of mankind's diseases in particular and for biomedical research in general. Through the activities of our Study Section, to be described presently, I am able to provide reliable and up-to-date information concerning current developments in this field and to suggest directions along which financial support would prove rewarding far out of proportion to the cost.

Ours is the opportunity of catalyzing the application to the life sciences of the precision and power of the physical sciences. From results already achieved it seems probable that, given sufficient financial and educational support, we in this generation may see revolutionary new developments in our understanding of the nature of life itself through a delving into the molecular microcosm of protoplasm. Such discoveries may well match, in portent for the human race, the current exciting exploration of outer space and the harnessing of the power locked in the nucleus of the atom.

It is easy to demonstrate the immediate applicability of biophysical science to the understanding and conquest of disease, particularly the degenerative and metabolic diseases. However, the real breakthroughs, which will be of historic significance will, in my opinion, result from basic research independent of its application to categorical disease entities. In addition to its other areas of responsibility the Arthritis and Metabolic Diseases Institute has been charged with the nuturing of the field of physical biology. Though I shall refer briefly to the overall program of this Institute, my own area of competence lies primarily in physical biology and the biophysical sciences, and I shall seek the chairman's permission to continue my remarks primarily to this subject though they have bearing also on the programs of all the other Institutes of the National Institutes of Health. Since, as far as I know, this is the first public testimony to be offered to your committee concerning biophysical science, I have dealt with the subject in some detail.

I. THE STUDY SECTION'S EFFORTS TO OBTAIN RELIABLE AND COMPREHENSIVE INFORMATION ABOUT THE STATUS OF BIOPHYSICAL SCIENCE

Detailed information concerning the research and educational practices of the various universities and research institutions across the land was obtained by the study section in 5 principal ways: (1) From the comprehensive collective knowledge of the members of the study section, themselves acknowledged authorities in biophysics; (2) from information contained in the more than 350 detailed grant applications reviewed by the study section; (3) from visits to various laboratories made by study section members in relation to grant applications or to inquiries regarding training potential; (4) from 3 regional conferences divised to sample opinions and practices of biophyicists in these areas; (5) from national and international conferences on particularly significant or timely research problems. The last two methods warrant special brief comment.

The regional conferences were held on both coasts and in the Midwest. From the 75 scientists who attended, the study section learned the philosophy of the individuals and the facts regarding research, teaching, and the professional status of biophysics in their respective institutions and at other institutions in the area. This testimony abundantly documented not only the great importance of biophysics for biomedical research but, also, the need for adequate financial support for the few large centers already established and for the

many other centers now in the planning stage. The pressing problem of developing new curriculums for graduate work in biophysics was also discussed, as well as the need for attracting the most competent students and investigators into the field.

At these conferences, opportunity was taken to inform the participants concerning the role of the National Institutes of Health in supporting research and training programs in biophysics.

Among the special conferences sponsored by the study section was that held at the National Institutes of Health on January 15–17, 1958, at which time approximately 20 of the world's leading physical biologists told section members and a limited additional number of specially invited scientists about the most recent advances in biophysics. The scientific areas discussed included molecular forces, radiation biology, subcellular and molecular structure as determined by electron microscopy and by X-ray diffraction research, replication of genes and viruses, the conversion of solar energy into stored energy by plants, and the biophysical basis of nerve and muscle function and structure. A number of distinguished theoretical physicists and physical chemists were in the audience, having been invited by the study section on an experimental basis in order to determine their reaction when confronted with complex biological and medical problems. This experiment was very successful in demonstrating their keep interest, as evidenced by their active participation in the discussion and by their penetrating questions.

Many other important points emerged as a result of this unusual conference, all of which will be included in the printed 200–400-page summary which should be available by July 1958. The research of these outstanding scientists pointed up the great complexity and the mass of detailed structures and reactions present in even the simplest viruses and micro-organisms. On the other hand, the encouraging possibility of being able to make rather broad generalizations about various classes of structures and chemical reactions, once sufficient detail is discovered about a limited number of each type, was held forth.

II. CONTENT AND SCOPE OF PHYSICAL BIOLOGY AND THE BIOPHYSICAL SCIENCES

The boundaries of the boroughs of a large metropolitan city are seldom obvious from the street. They are useful chiefly for administrative or historical reasons. There is free intercourse and travel between the boroughs, making each borough far more effective in the integrtaed whole than if isolated. Thus it is with the various disciplines in the life sciences—biophysics, biochemistry, molecular biology, cell biology, and behavioral or evolutionary biology. Each is a recognized entity with its professional status and its historical background. But all deal with various aspects of living organisms, normal or abornmal. Prof. A. V. Hill, Nobel laureate of London, and perhaps the world's senior living biophysicist, in an article reprinted in Science (vol. 124, p. 1233, 1956) has this to say about definitions: "The term 'biophysics' is coming today into common use, but as yet no clear definition of it has emerged. The emphasis must clearly be on the 'bio,' on function and structure viewed through physical spectacles and investigated by physical ideas and methods * * *. Science does not operate only in separate compartments of knowledge, and many of the best discoveries emerge from the borderland between several of them."

Some of the major areas of concentration in present-day physical biology involve the study of (1) the mechanisms of cell function at the molecular level (molecular biology); (2) the electrical properties of cells and tissues, primarily the nervous system and the sensory organs, as a complex system of communication (bioelectric phenomena); (3) the effect of high- and low-energy radiation on cells and organisms (radiation biology); (4) biomechanics and various applications of use in studying the physiological properties; (5) the physical basis of of ordered growth and development (developmental biophysics); (6) the description of biological processes in symbolic, mathematical terms for the quantitative analysis of function or the development of theoretical aspects (mathematical and theoretical biophysics); (7) instrumentation or instrumentology. Some of these may now be considered in more detail.

III. REPRESENTATIVE BIOPHYSICAL PROBLEMS WITH REMARKS ON THEIR BEARING ON BIOMEDICAL RESEARCH

1. The molecular architecture of tissues, cells, and their constituents

Particularly valuable has been the investigation, by X-ray and optical means, of the internal structure of biomolecules, particularly the configuration of their

main chains of atoms. These chains have, in many instances, been found to be helixes intertwined about each other. Alteration of this comfiguration leads to denaturation and loss of native properties.

Improvements in electron microscopy have so increased the useful magnifying power that it is now possible to see objects only a few atoms in thickness (10 angstrom or 1/25,000,000 inch). Protein and other large biomolecules (called macromolecules) can be clearly seen, as individuals. It is now possible to slice tissues and cells so thin (a millionth of an inch) that one can observe the formed structures of the cell at or near the molecular level. These developments have made possible major advances in the molecular biology of many biological functions, normal and abnormal.

Protein structure.—Application of these methods has given detailed knowledge of the internal structur of many proteins. We may stop to consider but three characteristic ones of the fibrous variety.

(*a*) Collagen: This is the major protein of the body, making up the chief constituent of the skin, bones, tendons, and connective tissues, generally. Collagen molecules have been directly observed with the electron microscope. X-ray analysis shows that they are made of three chains helically coiled about one another. The ways in which the long, thin, collagen macromolecules interact with each other and with other substances has been studied with great care. Such studies are of the greatest significance for the rheumatoid diseases, including arthritis, and for wound healing (which involves the making of new collagen for the new skin and the laying down of the new fibers in the appropriate manner). Collagen is also involved in cardiovascular disease, especially when collagenous tissue is laid down on blood-vessel walls, reducing their elasticity and bore. It is also highly important in aging processes.

(*b*) Muscle proteins: The chief fibrous proteins which compose muscle have been isolated and, at least partially, characterized. Efforts are now being made to understand the forces of interaction between the several types of rodlike protein molecules which cause the system to contract rapidly and reversibly. This is at the basis of contractility, generally. If we really understood the physical and chemical processes which go on in such systems, the scientific understanding of heart action and of other cardiovascular function would be greatly advanced.

(*c*) Blood-clotting proteins: Physicochemical investigations have greatly clarified the nature of the fibrous protein, fibrinogen, which, when converted to fibrin, produces a blood clot. The actual molecules of fibrinogen have been seen in the electron microscope. The complex enzymatic regulatory mechanism which causes clotting (polymerization of the fibrinogen monomers) to occur only under appropriate conditions, i. e., to prevent bleeding, has become a prototype of superbly regulated adaptive systems, generally, and the biophysical approach to this problem has proven most valuable. The clinical significance of such investigations is apparent to all.

Nucleic acids.—The type of nucleic acid (called DNA) in the chromosomes is composed of molecules which are extremely long and thin. They have been seen in the electron microscope, and X-ray analysis shows they are double-stranded helical coils. Along the lengths of the strands are the chemical groups which give the coding to the chromosomes and compose the genes which determine heredity. Biophysicists are intensely studying the processes which cause the individual chains to replicate and form new helical pairs. This is an essential act not only for all cell division and normal hereditary processes but, also, for infection by certain kinds of viruses.

Another kind of nucleic acid (called RNA) is believed to preside over the biosynethesis of proteins and other substances in cells. It receives its specific chemical coding from the chromosomal DNA, and, thus, the genes are able to direct biosynthesis through the intermediation of RNA (and a host of enzymes and other constituents). The act of synthesizing proteins (including the antibodies which provide for our immunity to disease) is clearly one of the most fundamental processes in living organisms. The details of the mechanism are now rapidly being unraveled by biophysicists and biochemists. When it is remembered that viruses owe their infecting power to RNA (or DNA) and that certain kinds of cancer (and maybe other types of degeneration and metabolic diseases) are thought to be caused by viruslike nucleoproteins, the importance of such basic studies cannot be overemphasized. It is probably correct to say that more of the able young physicists, who have in recent years become biophysicists. have turned to genetics, replication, virus, and DNA–RNA studies than to any other field. This is quite understandable, for these phenomena are at the heart of life processes themselves.

Fatty (lipid) molecules.—These molecules tend to form two-dimensional layered structures and they, therefore, compose the chief substance of the cellular membranes. These membranes represent the "floorspace" of the cellular factories. The enzyme molecules and other molecular machinery of the cells are mounted upon these membranes in specific array, so as to pass the molecules which are undergoing synthesis or degradation from one to the other biocatalyst with perfect precision. Little particles discovered in the cell almost a century ago, and called mitochondria, are now known to be the powerplants of the cell because they manufacture energy-rich substances commonly utilized by the cell to energize its various processes. Electron microscopy shows that these powerplants are composed of many layers of membranes on which are mounted the metabolic machinery. Such biophysical and biochemical discoveries are of first importance in understanding the processes of growth and development, normal and abnormal, and of many metabolic and degenerative disases. For example, insulin, the hormone whose presence or effect is lacking or deficient in diabetics, has been shown to be involved not only in the metabolic utilization of glucose within cells but, also, in the physical transport of glucose molecules through the lipoprotein surface membrane of the cell. Explanation of the mechanism of this effect of the hormone must await the biophysical elucidation of the molecular structure of the surface membrane.

2. Interaction properties of elongate giant molecules

Many of the vital structures in the cell occur as giant or macromolecules, as in the DNA of chromosomes and the fibrous proteins and the large globular proteins. These complex substances interact with each other with the highest degree of specificity, depending on the chemical environment in which they find themselves. This specificity (at all levels of complexity) is characteristic and requisite for life processes, but its physical mechanism is not understood. This represents a biophysical or physicochemical problem which is being intensely studied and which, if finally solved, would open up vast new areas for biomedical research.

3. Bioelectric studies, nerve function

Across the cell membrane there is an electrical potential difference or voltage. The movement of electrically charged substances across such membranes can be accurately followed by appropriate electrical measurement.

Messages or impulses travel down nerve fibers by means of changes in the membrane properties; these cause currents to flow and stimulate ahead. The question of the mechanism of this process of excitation and impulse propagation represents one of the classical problems in biophysics. Its solution will contribute greatly to neurological research, normal and pathological. Considerable headway has been made since the war by the use of radioactive isotopes by electrical studies and by electron microscopy of nerve tissue.

Methods of communications biophysics are now being fruitfully applied to a study of how the central nervous system receives and processes sensory information, and produces adaptive responses. Expansion of such studies will be of interest not only to psychologists and neurophysiologists but also to psychiatrists and students of behavior, normal and abnormal.

4. Radiation biology

I am aware that this committee is strongly interested in stressing the importance of fundamental studies in the field of radiation biophysics. The committee report accompanying the fiscal year 1958 appropriation made this very clear.

Whether in bomb testing, for actual military use or for peaceful purposes, the use of nuclear energy has brought into sharp focus the problem of the effect of high energy radiation on living organisms, particularly man. Actually the practical problems, such as what to do about fallout or radiation from other sources are more technological than scientific in nature. Fortunately the Nation has been warned from all sides that, since the effects of high energy radiation of all kinds are cumulative, every effort should be made to minimize exposure (even to X-rays for nonessential medical purposes). Unfortunately, the action of such radiation, in contrast to low energy, ultraviolet radiation, is nonspecific and its detailed mechanism is not understood.

Certain limited aspects of radiation biology are being investigated intensively in the various national laboratories (Brookhaven, Argonne, Oak Ridge) and in many other university and governmental installations. However, it would appear that through the National Institutes of Health program, emphasis might

well be placed on the basic problem of the physical and physicochemical events which occur in the cell when high energy radiation is absorbed.

In actual fact, progress in the field of radiation biology and radiation injury depends not only on a better understanding of what happens in a watery medium when ionizing radiation is absorbed, but also upon the effect of the radiation upon highly organized cellular macromolecules such as the nucleic acids in the chromosomes. This in turn requires a detailed knowledge of the size, shape, architecture, metabolism and function of these macromolecules which are the bearers of the genetic determiners. It is a matter of greatest urgency that this biophysical problem be subjected to a frontal attack with all available resources, for upon a solution to the problems may rest the fate of the race.

5. Physiological, technological, and engineering applications

Included in this category are many problems having an appreciable component of biophysics but which are at least as closely identified with a branch of pure or applied physiology. Examples include: biomechanical, stress-strain studies as related to muscle contraction, whether of skeletal, cardiac or the entire musculo-skeletal system; acoustic, sonic or ultrasonic radiation for localization of tumors or for therapeutic purposes; studies of blood flow in capillary systems, etc.

6. Instrumentation and instrumentology

Modern biophysical science requires the use of complex and expensive instrumentation. This represents the "hardware" of the discipline. Included are instruments such as the analytical and preparative ultracentrifuge, electrophoresis apparatus, electron microscope, X-ray diffraction, spectroscopes of various kinds, high energy radiation sources and electronic and computer devices. Often, several of the same devices are needed in a single group or department because individual experiments may require many hours: hence frequently the instrument cannot be shared with other investigators. Thus it costs at least $100,000 to $200,000 to equip a modern biophysical laboratory with all the heavy instruments needed. This is especially significant in training programs in which trainees are to be given experience with the use of the whole gamut of such biophysical instruments.

Equally important is the fact that, to make rapid progress in the physiochemical characterization of proteins, nucleic acids, polysaccharides and other strategically important biomolecules, it is necessary for the individual investigator and his team to be able to apply each of these methods and instruments to the problem. If he must seek the help of colleagues, who have one or another of the instruments he lacks to take over part of his problem the rate of progress is greatly retarded. In instances known to me, the solution of important biophysical problems was in the past held up for years because of such roadblocks. Conversely, the remarkable progress made by investigators such as Prof. Paul Doty of Harvard University, who has fairly complete instrumentation, clearly documents the point.

Very few existing centers possess such complete coverage and since such coverage is highly desirable, this substantial item should receive favorable consideration in the appropriation.

Instrument design for the solution of specific scientific problems, called "instrumentology" by Dr. Paul Klopsteg, is a dignified and rewarding discipline which should be encouraged in every way possible. Dr. Klopsteg's report (made in 1956 under the auspices of the National Research Council under a grant from the National Institutes of Health) recommends the establishment, in major metropolitan areas, of centers shared by all the universities and research groups in the area, staffed by specially trained instrumentologists and well equipped with all the machines, tools, and instruments to design and fabricate the instruments needed by the participating scientists. A few groups of this sort should be activated around the country as a pilot test. This would probably in turn require the establishment of training centers where instrumentologists in sufficient numbers could be turned out annually to staff the various centers as they are activated . I believe that the initial phase of such a development could be accomplished if $500,000 were provided for the purpose.

IV. NEW FRONTIERS, PORTENTOUS POSSIBILITIES

1. Viruses, genes, biosynthesis, replication, and their interrelationship

The genetic material in viruses, bacteria, and presumably all cells, appears to be nucleic acid, DNA (or RNA in some cases). In replication and genetic recombination the helically coiled pairs of chains come uncoiled, in the process are replicated, and the resulting chains recombine to form two double-stranded DNA macromolecules. When bacterial viruses infect cells the nucleic acid of the virus is "injected" into the cells where it commandeers the biosynthetic and metabolic apparatus of the infected cell and causes it to biosynthesize many copies of the invading nucleic acid molecules, together with its accompanying protein. Thus, when the invaded cell eventually bursts and is destroyed there are liberated a hundred or so newly formed replicas of the invading viruses. This is the essence of infection. The lessons it teaches are of greatest practical as well as theoretical importance for an understanding, and eventually the treatment, of virus infection generally.

However, the matter goes deeper. It has been known for years that nucleic acid isolated from one type of bacterial cell and highly purified can, if applied to a different strain of cells (deprived of their own DNA), impress the genetic characteristics of the donor cells. The DNA was known as a "transforming factor." Subsequently other experiments confirmed this work and indicated that pure DNA, a chemical compound, can "infect" a cell as well as determine its hereditary constitution. This is a discovery of the first magnitude. Together with other astonishing new developments in the biophysical chemistry of the nucleic acids (such as the "synthesis" of artificial nucleic acids in the test tube), a new era has been introduced into biology which will have widespread repercussions not alone in academic biology but also in biomedical research.

2. Biomolecular organization and biological properties

The last decade has seen a very great advance in the development of the various physical and physichochemical methods by which it is possible to deduce the precise structure of the complex molecules—the proteins, nucleic acids, lipids, carbohydrates, etc.—which form the physical basis of life processes. There is an enormous difference between such precise information and less exact data.

For example, it had been known for sometime that nucleic acid (DNA) is a giant molecule of molecular weight about 7 million, very long and very thin and that it is essentially a polymar of waferlike chemical groups (nucleotides). However, when the structure was more precisely known and it was discovered that DNA consists of two long polynucleotide chains coiled about each other and loosely (though quite specifically) bonded to each other at each residue pair, it became possible to understand how recombination and duplication might occur.

Biochemical and genetic knowledge already available was then brought to bear and a genuine breakthrough occurred. Similar considerations apply to the recent X-ray and physicochemical demonstration of the detailed structure of proteins. The protein, collagen, so intimately involved in many of the arthridites, is an example from the class of fibrous proteins. Enzymes constitute an excellent example of the important of detailed structural data in determining the nature of the catalytic action on which all life processes depend. Finally, the electron microscopy of tissue cells and of molecules themselves has advanced by an order of magnitude in the last few years, particularly in our ability to cut very thin sections (less than a millionth of an inch thick). If progress continues at the same rate it may soon be possible to observe the individual molecules (such as enzymes and other proteins) as they occur in the cell lattices. It may confidently be expected that when such advances occur, many fundamental physiological processes (such as contractility, nerve conduction, secretion, and so forth) will suddenly be solved in a manner analogous to that which produced the great push in the virus-gene-nucleic acid field.

3. Toward a theoretical biology

Research advances in the areas of biophysics, biochemistry, and molecular biology have been so striking in the last decade or so and will probably continue for years to come that this midcentury may come to be recorded in history as the dawn of a truly classical period in the life sciences, including medicine. There can be no question but that these scientific advances will bring with them great strides in medicine, in longevity, and in mental health. However, unlike

a similar period of great activity in physics at the turn of the century, the biological advance was accomplished almost entirely without benefit of a coherent body of theoretical knowledge; a theoretical biology comparable to mathematical and theoretical physics is essentially nonexistent.

In this testimony I lay great emphasis on the desirability of making it attractive for theoretical and mathematical physicists to become interested in the life sciences. It is possible that, in concert with our best minds in the biomedical sciences, such an infusion from physics and mathematics may hasten the development of a powerful field of theoretical biology. Any steps by which this could be accomplished should be taken at once.

V. CURRENT ADJUSTMENTS OF UNIVERSITIES, MEDICAL SCHOOLS, AND RESEARCH INSTITUTES TO DEVELOPMENTS IN BIOPHYSICAL SCIENCE

This year saw the official formation, with about 700 charter members, of the Biophysical Society, a professional organization for the advancement of biophysical science generally. At the present time there are only some seven departments of biophysics, actually so designated, in the country. Many universities are initiating lectures in the subject before establishing formal departmental status. Biochemistry, the older brother of biophysics, started in colleges and then around the turn of the century came to be adopted in medical schools as a full-fledged preclinical department. If a similar future is in store for biophysics, possibly at a much faster tempo than with biochemistry, one could visualize the formation of perhaps 75 to 100 new groups or departments of biophysics (or physical biology). A precedent exists in one first-class university for the establishment of a department of biophysics both on the college campus and at the medical school.

The most pressing needs.—At this early stage of development it is obvious that the most pressing need is for competent personnel to staff the new departments and research groups which are now forming across the country. Education and training programs at every level, undergraduate, graduate, and postdoctoral, should be liberally supported. The study program which the Study Section on Biophysics and Biophysical Chemistry was arranged for this summer is expected to be very productive. Under the auspices of the National Institutes of Health, about 100 carefully selected scientists, including many world-renowned physicists and physical chemists as well as biophysicists, will spend a month in lectures, workshops, and conferences on the broad field of the biophysical sciences. This rather ambitious program has two major aims: (1) To inform a group of highly selected physicists and physical chemists of the content, scope, and potential possibilities in the biophysical sciences; (2) to broaden the background and interests of those already professionally committed to biophysics but whose previous experience has been highly concentrated in one or another of the segments of the field. One of the important dividends of this study program will be the publication of a definitive source book in the subject, based on the formal lectures given during the program.

With the foregoing material serving as descriptive of the field of physical biology, its current status and its great potential to the progress of medical research, I come to an aspect which is essential for the successful exploitation of this potential. This involves the inescapable fact that substantial sums of money will be required for such an effort. The biophysicist today is in a seller's market. The bidding for his services is highly spirited. Also, as already mentioned, the tools of his profession are complex, frequently custom-built instruments, and therefore are costly in terms of procurement and maintenance. For example, a high-resolution electron microscope costs $40,000, an analytical ultracentrifuge costs $20,000 and nuclear magnetic resonance equipment costs $50,000 to $100,000. Furthermore, as a part of a new and rapidly developing field, sufficient space for the biophysicist's research is frequently unavailable except at the expense of productive established programs in older categories or disciplines. Consequently, new space becomes essential to the effort.

All of this, then, brings us to the relevance of the grants-in-aid programs of the National Institute of Arthritis and Metabolic Diseases in particular and the National Institutes of Health in general to the current and future needs in physical biology.

As with most of the programs supported by the National Institutes of Health, biophysics is confronted by two pressing financial needs: Those for training activities and for research projects. I have purposely mentioned them in that order because of the urgency for a major and immediate expansion of current

efforts in the training of additional teachers and investigators. This is not intended to detract in any way from the pressing need for research effort in this field. Rather it is meant to emphasize the necessity of prompt attention to that portion of the total long-range problem, namely training, which is so frequently neglected in the desire to concentrate our resources for short-term gain.

Despite the recent widespread interest in the varied and challenging opportunities offered in physical biology, there exist at the moment only 7 departments, actually designated with the term biophysics, where qualified students can obtain the type of training considered essential for a productive career in this field. A survey of the current training potential reveals, however, that if adequate funds were available, this number could be effectively expanded at least threefold within the next 1 to 2 years.

Within the availability of present funds, a modest beginning by the National Institutes of Health in support of training has been made. Keenly aware of the great difficulty inherent in attracting outstanding undergraduate physicists, mathematicians, and physical chemists into graduate work in physical biology, for reasons already discussed, and in view of the nonexistence a year and a half ago of funds specifically earmarked for training in physical biology, the Biophysics and Biophysical Chemistry Study Section decided to attack this problem by recommending supplementary grants to National Institutes of Health research grants already held by a limited number of eminent biophysicists. Approximately 20 such supplements were awarded, each providing funds for 1 or 2 first-year graduate students. Careful followup checks on these special grants have clearly shown that this pilot program has been an outstanding success. A number of excellent students have thereby been attracted into biophysics.

Turning now to the specific problem of research grants, support from the National Institutes of Health for research in various areas of physical biology has already demonstrated a marked impact. Since 1955 when recognition of this burgeoning field was noted in the establishment of the Biophysics and Biophysical Chemistry Study Section the growth of such support has resulted in a fourfold increase in funds awarded for projects in biophysics and biophysical chemistry in a single fiscal year, namely from fiscal year 1956 to fiscal year 1957. The details of this increase are noted in the following table:

TABLE I.—*Biophysics and biophysical chemistry research grant support by the NIH, fiscal year 1956 to fiscal year 1959*

Fiscal year	Number of applications approved	Amount of money approved	Number of applications paid	Amount of money paid
1956	44	$423,267	44	$423,267
1957	96	1,765,110	96	1,765,110
1958	123	2,173,856	88	1,652,479
1959 (projected)[1]	190	4,000,000		

[1] Estimated on the basis of applications already approved and not paid, plus additional requests anticipated for fiscal year 1959 funds.

Although this rate of growth of this field, as shown in table I, is most encouraging, the extent by which available funds have been outstripped by the total of research grant requests is cause for genuine concern. In fiscal year 1956 it was possible to activate all approved applications in physical biology. In fiscal year 1958, however, a completely different situation unfortunately prevails.

Specifically, it is estimated that in the National Institute of Arthritis and Metabolic Diseases alone, wherein responsibility for this program has been centered, there will be approximately a million dollars of approved research grant applications in physical biology coming before the June Council meeting which could not be paid unless there is a substantial increase in the level of that Institute's appropriation. In other words, about 50 promising requests in this newly developing field offering great opportunities in the battle against the ills besetting mankind must go unfinanced, and to a large degree the proposed research in physical biology must thereby remain undone. In addition, a sum of $4 million represents other approved applications which are anticipated for consideration at the following November and March Council meetings and which must also compete for the funds in this appropriation.

In order to eliminate these financial obstacles to the efficient and logical expansion of training and research activities in biophysics, I warmly recommend for the commmittee's consideration the following figures, representing what I believe to be a sound estimate of the funds required in physical biology for this Institute in the next year (fiscal year 1959).

Training	$2,500,000
Resarch	5,000,000
Instrumentology	500,000

It should be understood that these sums should be over and above those appropriated for other important facets of the programs of the Arthritis Institute, for I am told that the backlog of over $6 million referred to by Dr. Holbrook includes less than $1 million for physical biology.

To fail to meet this challenge posed by the emergence of physical biology as a major education and research discipline would mean not only to delay laying scientific ground work for the curing of disease but also to miss an historic opportunity to foster programs which will throw important new light on the physical basis of life itself.

Dr. SCHMITT. Thank you. I am prepared to discuss it in whatever detail you would like.

Senator HILL. Go right ahead and present the matter to us. We are very much interested.

Dr. SCHMITT. Thank you very much.

Senator HILL. We are seeking enlightenment. Go right ahead.

REQUESTS IN BIOPHYSICAL FIELD

Dr. SCHMITT. Thank you. May I say this: That when the number of requests which were coming to the National Institutes of Health in the field which might be called the biophysical sciences, when the number of requests began to increase a good deal, a new study section was formed which was called at first the Biophysics Study Section. I have been its Chairman since its beginning, and it is now 3 years old. I might also say that it was subsequently called, at our request, "Biophysics and Biophysical Chemistry Study Section," because physical chemistry is an integral part of this field of biology and biophysics.

Now I and the other members of the study section wanted very much to have an opportunity to do what we could through the instrumentality of this agency to support and help initiate this program in the United States, for that matter, in the world, because we felt that we stand at a very crucial or critical year and period in the development of the life sciences. As a result, we were given the opportunity, in the study section of programing, which is to say, to look into all the various possibilities.

We are therefore able to offer you up-to-date and rather detailed information about the state of this field. We obtained this information in at least five different ways:

In the first place, the study section has on it leaders in the field of physical chemistry, biophysics, and molecular biology; therefore, from the composite knowledge of the members of this committee and by comparing notes we have a good backlog of information.

Secondly, just by considering the grant applications themselves we have obtained much information across the board. These applications included practically all of the various subject matters.

Third, we made it our business to visit many of the laboratories in this country personally, and find out what their programs were, as well as to make project site visits in connection with specific applications.

Fourth, we held 3 regional conferences, 1 on each coast, and 1 in the Midwest, viz, 1 here at Bethesda, 1 at Berkeley, Calif., and 1 at Ann Arbor, Mich. To these conferences were invited some 75 of the leading biophysicists of those respective areas. We asked these individuals to tell us about their programs at their universities and in the general geographical area.

From these regional conferences we were able to get a very good line on the status of the field in this country.

Finally, we obtained information from certain national and international conferences which the study section had called. We held 1 last January here at Bethesda, a 3-day conference, involving about 25 internationally known authorities. Furthermore, the study section is holding, this summer, a monthlong conference, from which we expect to learn a great deal more.

AGREEMENT ON MEANING OF TERMS

Now, Mr. Chairman, there is some uncertainty about the terms "biophysics" and "biophysical chemistry" and "physical biology," and so on, and I might say that this uncertainty is certainly not limited to nonscientists, but exists even among scientists themselves.

One of the first actions that our committee took was to formulate a notion, for ourselves, as to what we understood the biophysical sciences are; and, for your information, I have prepared and put in the record a reference to a paper by Prof. A. V. Hill, of London, a Nobel laureate, and perhaps the senior biophysical scientist in the world, who, in addressing a medical symposium in Britain, gave a talk called Why Biophysics?

QUOTATIONS FROM BRITISH PAPER

We were so impressed with this talk that we asked to have it printed. I have furnished for your record, a few direct quotations from that paper, and with your permission, I would like to paraphrase at least some of these quotations so you may have an understanding of what at least some of us think biophysical science is. One can certainly say some things that it is not. It definitely is not a second- or a third-rate physicist going into the field of biology. It definitely is not a biologist who happens to use some physical instrumentation. If that were the case, anyone who uses a microscope would be a physicist. It certainly is not a person who prepares instruments or otherwise does merely technical work of any sort. Rather, I think we have to think of biophysical science as an area of work which is defined pretty much by the type of intellectual process which goes into the work, plus, as Dr. A. V. Hill says—

There are people to whom physical intuitions came naturally, who can state a problem in physical terms, who can recognize physical relations when they turn up, who can express results in physical terms. These intellectual qualities, more than any special facility with physical instruments and methods, are essential to the makeup of a biophysicist. Equally essential, however, are the corresponding qualities, intuitions, and experience of the biologist. A physicist

who cannot develop the biological approach, who has no curiosity about vital processes and functions, who is not willing to spend time in learning the habits of living things, who regards biology simply as a branch of physics, has no important future in biophysics.

The ideas and methods of physics and of physical chemistry are being applied today, and will be increasingly applied, not only directly to physical medicine and radiology, but to neurology, to the study of circulation, of respiration and excretion, and of the adjustment of the body to abnormal conditions of life and work. At long range, moreover, they will be aimed at the fundamental problems of minute structure and organization, of the physical basis of growth and inheritance, of the ordered and organized sequence of chemical reactions in vital processes, of the means by which energy is supplied and directed to vital ends.

The chief answer, then, to the query "Why biophysics?" is that the recognition of biophysics as a special subject if study will emphasize the fact—and I think it is a fact—that the future of biology and medicine will increasingly require the application of physical and physiochemical ideas and methods. To give biophysics a name and personality, to endow it with a few centers where it can be specifically practiced, to realize that its recognition implies much more than just mixing up biologists and physicists (good as that is) will draw in recruits to a science that in 20 years or so may have the same importance to biology and medicine as biochemistry has come to have today.

One could, if one liked, think in terms of a diagram like this [indicating], where this is biology (Dr. Schmitt indicated one corner of a triangle) this is physics [indicating] a second corner of the triangle and this is chemistry [pointing to the third corner] and this is really unrealistic, because it should be three dimensional, because mathematics should be up here [pointing to a location in front of the imaginary triangle]. Neglecting that, at any rate, if we think of pure physics being over here and pure biology (meaning by that biology of the organisms, behavior sciences, and also many branches of medicine) in this corner, then biophysics would be certainly somewhere in here [pointing to a portion of the triangle between physics and biology] as biochemistry is somewhere in here and physical chemistry is somewhere in this region.

But this, as Professor Hill so well pointed out, is not a sufficient explanation, because Hill emphasizes the desirability and the necessity of individuals in their early training getting a great deal of their physical and mathematical background while young, and then going into the biological sciences so they shall carry with them in their medical or biological work thereafter the precision of thought and the type of thinking which goes into these exact sciences.

CONTENT AND SCOPE OF PHYSICAL BIOLOGY

I would like, with your permission, sir, to say something about the content and scope of physical biology and the biophysical sciences, so I could illustrate a little bit better to you what is involved and I can do this by considering such things as the following:

1. The mechanisms of cell functions at the molecular level—molecular biology;
2. The electrical properties of cells and tissues, primarily the nervous system and the sensory organs, as a complex system of communication—biolectric phenomena;
3. The effect of high and low energy radiation on cells and organisms—radiation biology;
4. Biomechanics and various applications of use in studying the physiological properties;

5. The physical basis of ordered growth and development—developmental biophysics—that is to say, what makes organisms grow as they do, and why do they not grow wild as cancers do;

6. The description of biological processes in symbolic, mathematical terms for the quantitative analysis of function or the development of theoretical aspects—mathematical and theoretical biophysics;

7. Instrumentation or instrumentology.

MOLECULAR ARCHITECTURE OF TISSUE CELLS

Now, may I say a few words about these in more detail? We will first discuss the molecular architecture of tissues, cells and their constituents.

Consider yourself as an individual who has the assignment of trying to find out how a certain, shall we say, factory, produces a product, but you are not permitted to go into the factory. Perhaps it is wartime and you are a spy or something of that nature but, at any rate, you are not allowed in the factory, and you can only stay at a respectable distance away and use binoculars try to look into the windows. You might see trains coming and unloading things and taking them away. You could look in the windows and perhaps see machines and see men standing around the machines, rather vaguely, but certainly it does not help you too much in finding out what is going on.

This was the situation in biology about 20 or 25 years ago. It was a fixed principle of physics that no one was able to see anything smaller than half a wavelength of light, which is about one-hundred-thousandths of an inch. To us working in that field, that is enormous, but, at any rate, if that is the case, if we can never see anything smaller than that, then we are indeed like the man who is looking out with the binoculars and trying to make out what is going on in the factory. But now, thanks to the application of physical principles and in particular the development of electron microscopy to resolve, with the electron microscope, objects only a few atoms in thickness (10 angstroms or one-twenty-five-millionth of an inch). In addition, we are now able to slice tissues and cells very thin (a millionth of an inch), which makes it possible to utilize the enormous resolutions of the electron microscope. We can now see the molecules themselves. X-ray methods have been developed to make it possible to unravel the detail and the structure within the molecules.

Now then, sir, we have been given access to this factory. We are walking around, as it were, in the rooms. We are looking over the shoulders of the workmen; we are looking at the machines which they are using, and, what is more, by the detailed biophysical applications, which are obviously going to take some more years, we are going to learn about the detailed structure of the proteins and those biomolecular structures on which all life depends.

Now, this I call molecular biology. It is the finding out of how things work at the molecular level, which is where they do work.

I want to stress the fact that all of our medical problems, and indeed, any of our biological problems, will, in the end, have to be explained in such simple terms. We are closer to it in some cases, and quite remote in other cases.

What I have to say quite obviously indicates that this field impinges very importantly on medicine, on illnesses of all kinds, but also on the study of life itself.

PROTEINS

Now, with respect to proteins, if I may take a few examples in which research of this kind may be expected to yield fruit in respect of the cure of diseases, I should like to choose but three examples.

COLLAGEN

One of these is the protein "collagen." This is the major protein of the body, making up the chief constituent of the skin, bones, tendons and connective tissue generally. There is more collagen in our body than any other protein.

Now, as Dr. Holbrook would, I am sure, bear me out, the arthritic diseases, the rheumatoid diseases, and so on, depend very importantly on disorders of the connective tissue and in particular on this molecule, collagen. Until now, no one had much of an idea what the molecule is like. Now, by virtue of X-ray analysis—and may I say that as to the leading theory on this, the structure was done right here in the National Institutes of Health—it is possible to tell what the internal structure of collagen is. We know it is a very long, thin molecule, with three coils helically wrapped about each other. We are also able to tell something about what causes these individual, long molecules to form into these long fibers which compose the tendons and the various forms of connective tissue.

Collagen, of course, is very important in the healing of wounds. It is involved in cardiovascular disease, especially when collagenous tissue is laid down on blood vessel walls, reducing their elasticity and bore.

It is also highly important in the ageing processes, because from such effects come all the secondary effects of senility and ageing and so on. So collagen is an extremely basic substance concerned intimately in the problems of the ageing processes.

MUSCLE PROTEIN

Second, I would like to say a word about the muscle proteins.

Now it has been possible to isolate from muscles at least several of the most characteristic proteins and, by application of biophysical methods, to determine something about the chains built up from these molecules. Most important of all, I should like to deal with the processes by which these individual threadlike molecules interact with each other and, by so doing, causing a shortening of the muscles or a tension production.

This, of course, is the very basis of contractility and, obviously, is involved clinically in many problems of cardiovascular diseases, particularly of the heart which, as you know, is a muscle that is beating all of the time.

BLOOD-CLOTTING PROTEINS

Third, I would like to say a word about blood-clotting proteins, to which reference has already been made. Physiochemical studies of this blood-clotting protein, fibrinogen, have been made in the National

Institute of Arthritis and Metabolic Diseases, of the National Institutes of Health. Here we have a system which, in a sense, gives us the real feel of molecular biology, and the real feel of its application in medicine, because in the bloodstream, under normal conditions, we find these elongated molecules of fibrinogen which have a propensity for polymerization, which is a clotting of the protein, fibrinogen. Now, why do these molecules not polymerize under normal conditions and thus avoid production of a blood clot? (Unwanted clots within blood vessels could, of course, lead to coronary thrombosis or other deleterious results.) Because of a very complicated enzyme system which is built into the body which is a positive feedback system, which causes this clotting to occur only under certain conditions; to occur only where and when it should occlude blood vessels, to prevent bleeding.

The understanding of this process by which the individual molecules, the precursors of the clot protein, are kept in an unclotted form and prevented for polymerizing within the blood vessels, is one of the real accomplishments of modern chemistry.

NUCLEIC ACIDS

Now, I would like to say a few words about nucleic acids. The type of nucleic acid called desoxyribonucleic acid (DNA) in the chromosomes is composed of molecules which are extremely long and thin. The chromosomes, of course, are the carriers of heredity. They have been seen in the electron microscope, and X-ray analysis shows they are double-stranded helical coils.

Along the lengths of the strands are the chemical groups which give the coding to the chromosomes and compose the genes which undermine heredity. Biophysicists are intensely studying the processes which cause the individual chains to replicate and form new helical pairs. This is an essential act, not only for all cell division and normal hereditary processes, but also for infection by certain kinds of viruses, which I should like to discuss in just a moment.

I call your attention to the fact, and this is extremely important, that this complex organic compound has now been brought to a point where we can do something with it by virtue of this frontal attack by biophysical methods.

Another kind of nucleic acid called ribonucleic acid (RNA), is believed to preside over the biosynthesis of proteins and other substances in cells. The current idea, which I daresay is correct, is that this RNA gets its coding from the DNA in the chromosomes, and thus the genes are able to direct biosynthesis through the intermediation of RNA. Furthermore, the RNA provides the specificity for the biosynthesis of proteins generally. When we remember that the proteins in the blood which give immunity and protect the body against disease, the gammaglobulins are such proteins; and when it is remembered that that biosynthesis depends, according to this theory, upon precisely this kind of coding from RNA—and may I say this has all come up in the last 6 or 8 years, and I am trying to give you some kind of a notion of the thrill of this present age of biophysical chemistry, particularly, when we realize that all of this has come up so recently that the whole question of biosynthesis is involved, I think you can get a notion of how significant biophysics is.

FATTY MOLECULES

Now, I want to say only a word about the fatty or lipid molecules. We regarded the cell as a factory before. This is a good figure of speech. Any factory has to have floor space as well as machines, and it turns out that the floor space of the cell is made up of these fats or lipids. This discovery was made possible by a study with the electron microscope as well as by X-ray studies and optical studies using fluorescent light.

Any factory also has to have energy to run its machines. One of the great advances in recent years was the discovery that certain granules can be seen in the cell. These granules are the powerplants of the cell and produce the fuel of the cell. They are made up of a series of three layers of structures, which are made of the lipids already mentioned.

Now, I would like to say a word about nerves. This happens to be my own personal specialty. I have been interested in it for many years.

The impulse which courses down the nerve fiber is essentially a membrane phenomena, that is to say, current passes across the membrane and, as a result of electrical current passing, the impulse courses down the nerve fiber.

Considerable headway has been made in recent years on the study of nerves, and I understand you heard some testimony about that this morning from the biophysical standpoint.

APPLICATION OF ELECTRONIC TECHNIQUES

In addition, additional advances are being made by the application of electronic techniques and computer mechanisms to try to find out exactly the way the central nervous system deals with impulses, processes the information, and so on.

Next I would like to say something about radiation biology. I am aware that this committee is strongly interested in stressing the importance of fundamental studies in the field of radiation biophysics. The committee report accompanying the fiscal year 1958 appropriation made this very clear.

I would like to point out that, aside from the technical implications of what to do about such things as fallout, and radiation from installations and reactors for nonmilitary purposes, the basic problem of radiation biology—and I speak now about higher radiation or high-energy radiation, such as would come from a bomb and so on—is extremely poorly developed. Unfortunately, the action of such radiation, in contrast to low-energy, ultraviolet radiation, is relatively nonspecific, and its detailed mechanism of action is not understood, as to its effects on cells.

As a result, one knows relatively little about the biophysics and biochemistry of what happens when this radiation is absorbed. Very much work along this basic line is badly needed, but until one knows also something about the molecular architecture of the cell itself, and the equipment within the cell, it is going to be hard to say how radiation works.

INSTRUMENTATION

Now, skipping over a little bit here, finally, I would like to say a word about instrumentation and instrumentology.

Here, I would like to introduce into the record a report of a survey by Dr. Paul E. Klopsteg, which was made under the auspices of the Biology Council, Division of Biology and Agriculture, and this is Publication No. 472, of the National Academy of Sciences, National Research Council.

By way of introduction to this, I might say that biophysical science requires complex and very expensive instrumentation.

This represent the "hardware" of the discipline. Included are instruments such as the analytical and preparative ultracentrifuge, which pins molecules down and determines their molecular weight; electrophoresis apparatus, which measures the electrical charge on proteins; electron microscopes; X-ray diffraction apparatus; spectroscopes of various kinds; high-energy radiation sources; electronic and computer devices, and so on. Often, several of the same devices are needed in a single group or department because individual experiments may require many hours; hence, frequently, the instrument cannot be shared with other investigators where a number of problems may be going on simultaneously, so that the labortary would need more than one instrument. Also, it costs something in the order of $100,000 to $200,000 to equip a modern biophysical laboratory, just with this heavy type of equipment. This is especially significant in training programs, because it is very necessary to have the young trainees in biophysical science to have the opportunity of working on all of these instruments.

RESULTS OF SURVEY

Feeling that this was a very important problem, that is to say instrumentation and instrumentology, the Biology Council and our study section, the Biophysics and Biophysical Chemistry Study Section at the National Institutes of Health, asked Dr. Paul E. Klopsteg to make a survey across the land, which he did. The results are incorporated in this report. He says:

> "Instrumentation," for the purposes of this report, may be used as a catchword for a very broad effort—

essentially that of capitalizing on the methodology and conceptual approach of the more exact sciences, mathematics, physics, and chemistry, including instrument production and distribution, and procedures for testing.

> The primary aim of this survey is to see how instrumentation, as thus defined, and "instrumentology," the study and application of physical principles and mathematical operations to designs for the experimental study of specific problems, might logically be expanded and adapted to the service of biological research.

Now, Mr. Chairman, this is a complex and difficult problem. I personally have wrestled with it for a number of years. I am personally very interested in it because I believe it is absolutely necessary, in view of the complexity of the equipment we are using, the cost of the equipment, and so on, that something be done to facilitate the study of instrumentation.

If I may cite Klopsteg's conclusion, as found on page 9, he finds:

1. There is need for action in the area of biomedical instrumentation, that matters cannot be left to laissez-faire treatment;

2. Even so, there is no royal road or master formula—one can but lay down general guiding principles;

3. It is probably best to start one, or perhaps a few, centers under a variety of formulas; and

4. The movement will lead to a new class of "biological engineers" at the professional level, requiring adaptations in the educational program, and attention to their acceptance and status.

Now, he proposes a sample model. He says:

It can be convincingly argued that the best and quickest way of working out the many troublesome details is actually to establish an institute of instrumentation and to solve each difficulty as it arises. In short, the important thing may be to get started, however modest the initial step.

Consideration should be given, he states, to the wisdom of forming a group to facilitate this coordination, and to the returns which might be expected from a possible network of consultants, or, such a coordinating agency, pulling together the new, unconnected elements of biomedical instrumentation, might be precursor to an eventual instrumentation center.

Dr. Klopsteg states:

Action is needed. A sample blueprint for that type of instrumentation facility judged most promising by the participants in the present survey—a regional center, developing from the joint activities of a group of interested universities and research laboratories.

Finally, he states:

The desirable solid foundation for the establishment and operation of a center would include: (*a*) means for the procurement and handling of biological materials, to maintain their supply and suitability for research studies;

(*b*) classrooms and laboratories designed and equipped for teaching and exploring the methodology of the physical sciences in biomedicine;

(*c*) associated shops to render the services essential to the research techniques and for the practical training of technicians;

(*d*) a supply of standard commercial instruments and such special ones as will meet the requirements, with technicians for their maintenance, and, where indicated, their operation; and

(*e*) an adequate library to support the research and teaching program.

A model center, established to meet the desiderata just enumerated, would have, in the aggregate, a staff competent to handle, for example: mechanics, heat and acoustics; optics, with emission and absorption spectroscopy, microscopy, and photography; electricity and magnetism, with electrical measurements, electronics, and control devices; radiation, with X-rays, X-ray and electron diffraction, electron microscopy, radioactive sources and tracers; hydrogen ion and oxidation reduction potential; polarography, chromatography, and molecular spectroscopy, et cetera. It would be equipped with commercially available instruments and apparatus; new devices would develop out of specialized research requirements. The shops would be staffed by technicians qualified to teach and train, and one or more competent reference librarians would be employed. Obviously, the "paper" phase, or counterpart, of the regional center would not assemble staff and equipment in a single spot, but would otherwise fit the pattern outlined.

NATIONAL INSTRUMENTATION CENTERS PROPOSED

Mr. Chairman, I am recommending that steps be taken at once to establish such a national center or centers, regional centers, as proposed by Dr. Paul Klopsteg, who is a national authority in this field,

and I am proposing that one-half million dollars be proposed for this purpose.

I should like to say something, if I still have your permission, about what might be called the new frontiers.

Senator HILL. Go right ahead, sir.

Dr. SCHMITT. I have made considerable mention of the great importance of biophysics in its application to medicine, about something which is, to most of us, quite evident, to those of us who are in the field. These things are evident and possible.

I should like to say a word about some of the new frontiers and some portentous possibilities.

First, I should like to talk about viruses, genes, biosynthesis, replication, and their interrelationships.

As I pointed out before, the genetic material in viruses, bacteria, and presumably in all cells, appears to be nucleic acid, DNA, or RNA, in some cases.

In replication and genetic recombination the helically coiled pairs of chains become uncoiled, in the process are replicated, and the resulting chains recombine to form two double-stranded DNA macromolecules. When bacterial viruses infect cells, then nucleic acid of the virus is "injected" into the cells where it commandeers the biosynthetic and metabolic apparatus of the infected cell and causes it to biosynthesize many copies of the invading nucleic acid molecules, together with its accompanying protein. Thus, when the invaded cell eventually bursts and is destroyed, there are liberated a hundred or so newly formed replicas of the invading viruses. This, sir, is the essence of infection. The lessons it teaches are of greatest practical, as well as theoretical, importance, for an understanding and eventually the treatment of virus infection generally.

TRANSFORMING FACTOR

However, the matter goes far deeper, Mr. Chairman. It has been known for years that nucleic acid isolated from one type of bacterial cell and highly purified can, if applied to a different strain of cells deprived of their own DNA, impress the genetic characteristics of the donor cells. The DNA is known as a "transforming factor."

Subsequently, other experiments confirmed this work and indicated that pure DNA, a chemical compound, can "infect" a cell as well as determine its hereditary constitution.

This is a discovery of the first magnitude. Together with other astonishing new developments in the biophysical chemistry of the nucleic acids, such as the "synthesis" of artificial nucleic acids in the test tube, a new era has been introduced into biology which will have widespread repercussions not alone in academic biology but also in biomedical research.

I do not know how far this is going to go, Mr. Chairman. I am quite sure that a term, such as "viruses" must now be generalized, because viruses really are nucleoproteins. Now, having found that nucleic acid alone, and the purified nucleoproteins alone, can do the job, it becomes possible that diseases involving viruses or thought to involve viruses may be caused, primarily, by these chemical compounds. Furthermore, there are portentous possibilities here which go very deeply indeed into the biological sciences. That is to

say, that a given type of DNA may take over, not just chemically, but perhaps may even alter the heredity characteristics of the invaded cell.

I have said something about the second item here, and I have said something about biomolecular organization and biological properties, and I have enlarged somewhat on that. I should perhaps like only to say here, by way of further example, that there is a great difference between knowing a good deal about a molecule and really knowing a whole lot about it, that is to say, the difference between being able to say that this molecule of protein or nucleic acid is a long, thin one, but not knowing precisely—and when I say "precisely" I mean to a hundredth of a millionth of an inch, precisely how the chains are composed within that molecule—the difference between those two is enormous with respect to what we can do as a result of that information.

MOLECULAR DISEASES

Dr. L. Pauling has referred to a number of these diseases as molecular diseases. It has been abundantly shown that some diseases depends upon an extremely small change in one link in a molecule.

Well, Mr. Chairman, as one who has worked in this field for some 30 years, I feel free to offer the opinion that the progress already made suggests that within the foreeseable future, detailed knowledge will be obtained about many, even of the smaller, proteins, much less these great, long, fibrous proteins, including the enzymes. All biochemical reactions that involve energy turnover are enzymatic, and there are literally hundreds of different types of enzymes, some of which are now being investigated in great detail. This is, I think, another example of the great new frontier of biophysics.

NEED FOR THEORETICAL BIOLOGY

Finally, and I hope I am not wearing out your patience, I would like to say that a truly theoretical biology is something that is badly needed.

These recent advances, which I find so thrilling and so important with respect not only to medicine but to the advance of biology as such, might, in the history books, be referred to in the future as almost a truly classical period. It is classical in the sense that all of these things are perfectly possible once the physical theory and the technical methods by which they can be investigated have been developed.

If, in fact, that turns out to be the case, that in the future our period will be known as a classical period in the biophysical sciences, then I should say that unlike a similar period of great activity in the physical sciences at the turn of the century, this biophysical advance was accomplished almost entirely without benefit of a coherent body of theoretical knowledge of biophysics. A theoretical body, comparable to mathematical and theoretical physics, is essentially nonexistent. In other words, biophysical science and biochemical science and so on is proceeding now without the benefit of a similar background which made all the great advances of physics possible, namely, theoretical physics, which is based on mathematical physics.

I would like immediately to say that in my opinion, one way of beginning a theoretical biology is to get theoretical physicists and mathematicians interested in the field, because it is quite possible that

the type of thinking which they use, when applied to biological problems, may lead to such a truly theoretical biology. When this comes, Mr. Chairman, that is to say, when a theoretical biology worthy of the name is established, I have a very strong feeling that the result will be similar to that which happened when quantum physics was started in what we call modern physics. We can't possibly predict where such a development of theoretical biology would lead us in our battle against disease.

In closing, I would like simply to say that in view of these very rapid advances in the biophysical sciences, certain adjustments in universities, medical schools, and research institutes have been necessary.

ORGANIZATION OF BIOPHYSICAL SOCIETY

This year, for example, saw the formal organization of The Biophysical Society with about 700 charter members. In other words, we have now a professional organization to see to the advancement of the science. However, there are, at the present time, to my knowledge, only about seven departments of biophysics in the country, actually so designated. That does not mean, of course, that many other departments, like our own, in the Massachusetts Institute of Technology, which is not called the biophysics department, do not do biophysics. They do, of course, but there are at present only seven formally called Departments of Biophysics.

Many universities are initiating lectures on the subject. It will be recalled that biochemistry, the older brother of biophysics, started in colleges, and then around the turn of the century came to be adopted in medical schools as a full-fledged preclinical department. If a similar future is in store for biophysics, possibly at a much faster tempo than with biochemistry, one could visualize the formation of perhaps 75 to 100 new groups or department of biophysics or physical biology, whatever they may be called. A precedent exists in one first-class university for the establishment of a department of biophysics, both on the college campus and at the medical school.

NEED FOR TRAINING AND EDUCATIONAL PROGRAMS

Now the most pressing needs, sir, are more training and education programs. At this early stage of development it is obvious that the most pressing need is for competent personnel to staff the new departments and research groups which are now forming across the country. We need personnel at every level, undergraduate, graduate, and postdoctoral. These training personnel, and the training program, should be liberally supported, and the study program, which the Biophysics and Biophysical Chemistry Study Section arranged for this summer is expected to be very productive. Under the auspices of the National Institutes of Health, about 100 carefully selected scientists, including many world-renowned physicists and physical chemists, as well as biophysicits, will spend a month in lectures, work shops, and conferences on the broad field of the biophysical sciences. This is a very ambitious program, which has two major aims.

1. To inform a group of highly selected physicists and physical chemists of the content, scope, and potential possibilities in the biophysical sciences; and

2. To broaden the background and interest of those already professionally committed to biophysics, but whose previous experience has been highly concentrated in one or another of the segments of the field.

One of the dividends, Mr. Chairman, of this study program, will be the publication, we hope, of a definitive source book in the subject, based on the formal lectures given during the program.

RECOMMENDATION FOR FUNDS

I come now to the fiscal aspect of my recommendations and, needless to say, I strongly recommend the appropriation of substantial sums of money in support of this effort. The biophysicist is today in a seller's market. The bidding for his services is highly spirited. The tools of the profession, the "hardware," and so on, frequently custom-built instruments, are very costly.

For example, an electron miscroscope costs about $40,000 and an ultracentrifuge about $20,000; magnetic resonance equipment, about $50,000 to $100,000, and so on. Also, as part of this newly developed field, sufficient space has to be made available without encroaching on other established space.

I would like, then, to recommend very strongly that the funds presently made available to the Arthritis and Metabolic Diseases Institute be increased considerably. In this connection, I would like to suggest that if you will study the material that has been put in the record, one will see, for example, that the number of grants in this field increased fourfold from fiscal 1956 to fiscal 1957.

A conservative estimate would say that something in the order of 190 approved applications are to be expected in fiscal year 1959. This will require about $4 million for research grants in this field. When it is remembered that we have a backlog of over $1 million in approved grants, which cannot be paid because of a shortage of funds in the present fiscal year, a total of $5 million is needed for research grants in the field of biophysics.

I have already mentioned one-half million dollars that I should like to recommend for instrumentology.

With respect to training grants, sir, our Study Section has spent a lot of its time going around the country informing physicists and physical chemists, as well as medical and biological people, about the program, and about the study program this summer, where we shall have one solid month of constant association with some of the leading theoretical physicists of this country and also physical chemists. We hope very much to make it possible for them to understand some of the possibilities of this program.

We very much hope that this type of programing will not be in vain, that is to say, because of the lack of funds.

I should like earnestly to plead not to put us in the situation where, having aroused the interest of theoretical physicists and physical chemists in the challenge of medical research, they do then come to us at the National Institutes of Health for the purpose of obtaining funds, only to find that there is no money available to them.

RECOMMENDED FUNDS FOR TRAINING

Therefore, I recommend very strongly that $2,500,000 be appropriated for training. It is most important to emphasize that these figures (namely $5 million for research grants; $2,500,000 for graduate training grants; and $500,000 for instrumentology) are suggested over and above those appropriated for other facets of the programs of the Arthritis Institute. To fail to meet this challenge posed by the emergence of physical biology as a major education and research domain would mean not only to delay scientific groundwork for the curing of disease, but also to miss an historic opportunity to foster programs which will throw important, new light, on the physical basis of life itself.

I have to apologize, Mr. Chairman, for having taken so long in the presentation, but I do feel very strongly about it.

Senator HILL. Not at all. We very much appreciate your statement. It has been most enlightening and most interesting, and I want to thank you for it.

STATEMENT OF DR. JOHN C. SULLIVAN

GENERAL STATEMENT

Senator HILL. Dr. Sullivan, is there anything you would like to say?

Dr. SULLIVAN. I think it has been very interesting to be able to attend this session with you, Senator. I certainly appreciate the opportunity.

Senator HILL. Doctor, will you identify yourself for the record. Give us your full name and everything.

Dr. SULLIVAN. John C. Sullivan, M. D., graduate, Georgetown University School of Medicine, Washington, D. C.

Senator HILL. You are a gastroenterologist?

Dr. SULLIVAN. I am a gastroenterologist, internist, consultant in medicine and gastroenterology to the Surgeon General of the United States Navy, Surgeon General, United States Air Force, and to the National Institutes of Health, chief of the gastroenterological clinic, Providence Hospital, Washington, D. C., assistant clinical professor of medicine, Georgetown University School of Medicine, visiting physician, department of gastroenterology, District of Columbia General Hospital.

Senator HILL. Thank you, Doctor. We are delighted that you could be with us.

Is there anything you gentlemen would like to add?

Dr. HOLBROOK. Not a thing, Senator. You have been so courteous and kind to us.

Senator HILL. This has been a most interesting session. We certainly want to thank you for coming here and being with us and bringing us the very fine and helpful and challenging testimony that you have.

Dr. HOLBROOK. Thank you, sir.

Senator HILL. We are deeply grateful.

The committee will now stand in recess until 10 o'clock in the morning.

(Thereupon, at 4:10 p. m., Thursday, May 15, 1958, the subcommittee recessed, to reconvene at 10 a. m., Friday, May 16, 1958.)

LABOR—HEALTH, EDUCATION, AND WELFARE APPROPRIATIONS, 1959

FRIDAY, MAY 16, 1958

United States Senate,
Subcommittee of the Committee on Appropriations,
Washington, D. C.

The subcommittee met at 10 a. m., pursuant to recess, in room F–82, the Capitol, Hon. John O. Pastore presiding.

Present: Senators Hill, Stennis, Pastore, Thye, and Smith.

Department of Health, Education, and Welfare

Need for Hill-Burton Hospital Construction Funds

STATEMENT OF HON. JOSEPH S. CLARK, A UNITED STATES SENATOR FROM THE STATE OF PENNSYLVANIA

APPROVAL OF FULL AUTHORIZATION URGED

Senator Pastore. The subcommittee will come to order.

Dr. Youmans, we have a Senator here who is going to make a statement.

Senator Clark. Thank you very much, Senator. I appreciate your courtesy in letting me appear first. I have another committee meeting pending.

Senator Pastore. I might say for the record that Mr. Hill, the chairman of the subcommittee, is attending another hearing this morning, and he has asked me to open this hearing.

Senator Clark. Senator, I have here a short, prepared statement which, with your permission, I would like to file in the record, and, in order to save your time and that of the committee, I will merely state that the statement indicates the crying need for additional Hill-Burton funds in the Commonwealth of Pennsylvania, and urge your committee to approve an appropriation of the full $210 million authorized for that purpose.

My statement includes a breakdown which shows that, with the amount of money which the Commonwealth would get from the $120 million appropriation, we would have $22,414,000 worth of projects, the total cost, ready to go by the end of the 1959 fiscal year.

ADDITIONAL PROJECTS

We have, however, an additional 20 projects, whose total cost would be nearly $40 million, which could be put under construction during the coming fiscal year—most of them before the end of this calendar year—if adequate Federal matching funds were available. Those

funds would total slightly in excess of $13 million additional. Therefore, we have in Pennsylvania projects which could be ready to go in short order to the tune of 3 times as much as we can put under contract with our share of the present appropriation estimate of $120 million.

I know that I do not need to labor the point with you, Senator Pastore, as to the enormous social consequences of the very heavy unemployment in my State which an increase in the Hill-Burton program would help to amelioriate, and the very great social benefits which will come from increasing appropriations to the total authorized.

PREPARED STATEMENT

Senator PASTORE. Thank you very much, Senator Clark. Your statement will be included in the record.

Senator CLARK. Thank you, Senator.

(The statement referred to follows:)

STATEMENT BY SENATOR JOSEPH S. CLARK ON BEHALF OF AN INCREASE IN HILL-BURTON HOSPITAL CONSTRUCTION FUNDS FROM $120 MILLION TO $210 MILLION

Mr. Chairman, if there is a consensus on any of the many proposals made to deal with the current recession, it is that this is the time to speed up the construction of needed and worthy public works of all kinds. Certainly, among the most worthy of public projects is the construction of hospital facilities under the Hill-Burton Act.

I have not endeavored to ascertain the need for Hill-Burton funds in other States, but I can assert that we, in Pennsylvania, are prepared to use our full share of the $210 million authorized, if the Congress appropriates it. We are not only prepared to use it, but we have longstanding needs for the hospital beds which would thus be made available.

We also have the highest level of unemployment in our Commonwealth since the depression which began in the 1930's. Now is the time to utilize idle manpower to meet a pressing public need. If we raise the appropriation for the Hill-Burton program to $210 million at the present time, the difference will be partly made up by reduced expenditures for public assistance and unemployment compensation, which are now at record heights.

In order to determine whether we could use our share of the full $210 million, I have obtained from the Department of Welfare of the Commonwealth of Pennsylvania a list of projects which are ready to proceed during the coming fiscal year if funds are made available. The list includes 35 projects, with a total cost of $62 million. Of these, 15 projects are in the plan for the coming fiscal year, assuming the appropriations remains at the present $120 million, which would allow our Commonwealth $6,386,409. They are as follows:

	Total cost	Federal share
Lewistown Hospital, Lewistown	$120,000	$40,000
Conemaugh Valley Memorial, Johnstown	1,400,000	[1] 370,000
Lee Hospital, Johnstown	1,630,000	[1] 380,000
Mercy Hospital, Wilkes-Barre	2,500,000	750,000
Wilkes-Barre General, Wilkes-Barre	3,000,000	750,000
Doylestown Hospital, Doylestown	500,000	167,000
Quakertown Hospital, Quakertown	532,000	178,000
Lock Haven Hospital, Lock Haven	2,503,000	835,000
Armstrong County Memorial Hospital, Kittanning	1,569,000	523,000
Mercy Hospital, Altoona	1,500,000	500,000
Nason Hospital, Roaring Springs	1,250,000	417,000
Pottsville Hospital, Pottsville	1,137,000	379,000
Harrisburg Hospital, Harrisburg	1,820,000	400,000
South Side Hospital, Pittsburgh	1,000,000	333,000
Women's Medical College, Philadelphia	1,953,000	264,367
Total	22,414,000	6,284,367

[1] Project now underway; estimated Federal share at time of pickup.

The remaining 20 projects could, for the most part, be put under construction before the end of this calendar year if the communities could be given the go-ahead sign. Total cost of these projects is nearly $40 million. The Federal share of these projects would amount to $13,259,235. It is thus clear that Pennsylvania could absorb additional funds equivalent to a program three times the present one. These 20 projects are as follows:

	Total cost	Federal share
Geo. F. Geisinger Memorial Hospital, Danville	$1,757,000	$555,800
Greene County Memorial Hospital, Waynesburg	855,800	285,267
Carlisle Hospital, Carlisle	3,500,000	1,166,667
Easton Hospital, Easton	98,000	32,667
Evangelical Community Hospital, Lewisburg	600,000	200,000
Lancaster General Hospital, Lancaster	2,000,000	666,667
Providence Hospital, Beaver Falls	1,000,000	333,333
Aliquippa Hospital, Aliquippa	495,000	165,000
Holy Spirit Hospital, Harrisburg	6,000,000	2,000,000
Erie Osteopathic Hospital, Erie	700,000	233,333
Muhlenburg Medical Center, Allentown	5,000,000	1,666,667
Philadelphia General Hospital, Philadelphia	875,000	291,667
Pennsylvania Hospital, Philadelphia	5,000,000	1,666,667
Memorial Hospital-Roxborough, Philadelphia	400,000	133,333
Chestnut Hill Hospital, Philadelphia	1,500,000	500,000
Nazareth Hospital, Philadelphia	6,000,000	2,000,000
Pennsylvania Hospital (rehabilitation) Philadelphia	250,000	83,333
St. John's Hospital, Pittsburgh	1,500,000	500,000
Passavant Hospital, Pittsburgh	2,000,000	666,667
St. Margaret Memorial Hospital (rehabilitation), Pittsburgh	246,500	82,167
Total	39,777,300	13,259,235

Under these circumstances, we regard an increase from the present level to the full authorization of $210 million as reasonable, practicable and highly desirable. It would enable us to build some of these projects now, when the need for jobs is greatest.

We had 509,000 persons unemployed in our Commonwealth as of April 15. Every major labor market in the State, except Harrisburg, Lancaster, and Allentown-Bethlehem, is now listed as a labor surplus area. The entire Philadelphia and Pittsburgh metropolitan areas are so classified. We have perceived only a few signs that the recession is going to come to an end quickly.

This is the kind of program which can, however, help to bring it to an end.

I think an increase in this appropriation is consistent with the spirit of the resolution which the Congress adopted in March calling for an acceleration of public works for which funds have been made available. I think it is also consistent with the letter from the President to the minority leaders of both Houses on March 12 in which he said that "acceleration of planned or needed public improvements can be helpful in promoting increased growth of the economy." I, therefore, urge your subcommittee to recommend an increase in the Hill-Burton appropriation from $120 million to the full authorization of $210 million.

Senator PASTORE. Dr. Youmans.

INDIRECT COST OF RESEARCH

VANDERBILT UNIVERSITY

STATEMENT OF DR. JOHN B. YOUMANS, DEAN, SCHOOL OF MEDICINE, NASHVILLE, TENN.

PREPARED STATEMENT

Mr. YOUMANS. Good morning, Senator Pastore.

Senator PASTORE. Doctor, you may proceed in your own way.

Mr. YOUMANS. All right. I have a statement here I would like to read.

Senator PASTORE. All right.

Mr. YOUMANS. I am Dr. John B. Youmans, dean of the Vanderbilt University School of Medicine and immediate past president of the Association of American Medical Colleges. I have been dean at Vanderbilt for 8 years, and for over 35 years I have been engaged in medical research and education.

I appreciate greatly the opportunity to appear before this committee whose chairman and members have shown such fine understanding of the health needs of our people and have given strong support to medical research and education.

SPONSORED RESEARCH GRANTS

I wish to speak to that portion of the 1959 appropriation bill for the National Institutes of Health which deals with sponsored research grants to medical schools and research institutions, particularly to section 207 which limits the reimbursement to medical schools to less than the full indirect cost of the research done under these grants.

I emphasize the word "reimbursement" which in itself defines the essence of the problem which I wish to bring to your attention. The cost of research is of two kinds, direct and indirect, sometimes called overhead. Direct costs are the salaries of personnel employed, costs of equipment and supplies. Indirect costs include shared general administration, plant operation, and maintenance use charge—depreciation—of building and equipment, libraries, and others. Indirect costs amount to a variable percentage of direct costs, differing somewhat from institution to institution, depending on local conditions and types of research.

I have attacked table I, and I call particular attention to column 4 which shows the determination of total direct costs according to an accepted formula of research under grants of the National Institutes of Health for 11 representative medical schools. These costs range from a minimum of 31 percent at 1 school to 52.03 percent at another.

BLUE BOOK FORMULA

The nature and the validity, as well as the magnitude of such indirect costs are recognized by other granting agencies, including other agencies of the Federal Government. It is important to point out that under the so-called Blue Book formula used in preparing table I, other agencies of the Government such as the Army, Navy, and Atomic Energy Commission recognize and pay the full indirect costs of research they sponsor.

I would also like to point out that nongovernmental agencies, such as the National Foundation for Infantile Paralysis, recognize these costs and their magnitude. The National Foundation for Infantile Paralysis is paying the full indirect costs of the research they sponsor. The American Cancer Society is planning to follow suit.

The National Institutes of Health pay for the direct cost of the research they sponsor, but unfortunately they fail to pay the full costs. A maximum of 15 percent is allowed for reimbursement to the medical schools for indirect costs of the research they perform. This falls far short of the full indirect cost that is involved.

ANALYSIS OF COST OF NIH-SPONSORED RESEARCH

Table II, which is attached, is an analysis of the cost of National Institutes of Health sponsored research in 5 representative medical schools for the past 10 years. It gives the amount of direct and indirect costs, the portion of the indirect costs as reimbursed by NIH and the balance of the indirect costs that must be borne by the schools. The amount of indirect costs paid by 4 of these schools from their own funds in 1957 ranged from $73,743 to $172,257, or from 21.6 percent to 42 percent.

In other words, this money did not pay the full indirect costs. They pay only those percentages.

In all, these four schools contributed $374,907 to the cost of research sponsored by NIH in 1957.

COMMITTEE REPORT

Section 207 of the House appropriations bill for the National Institutes of Health specifically limits the payment of indirect costs to 15 percent of the direct costs. The justification for this action, given in the formal report of the Committee on Appropriations is as follows:

> The committee did not allow the increase for overhead expenses. As was said in the report last year when a similar request was disallowed: "The committee does not doubt that most medical schools need some additional financial assistance. However, funds appropriated to the National Institutes of Health are not for the purpose of general assistance to medical schools, and the committee was not convinced that the research program for which these funds are appropriated would suffer by maintaining the current policies in regard to overhead allowances, or that the maintenance of this policy would be unfair to the institutions that request these research grants."

It is my hope and that of all others concerned with the vital necessity of maintaining the operation of medical schools that this action can be reversed and resolved in favor of the medical schools.

REIMBURSEMENT FOR OUT-OF-POCKET COST REQUESTED

With reference to the committee's statement "The committee does not doubt that most medical schools need some additional financial assistance," I wish to make the point in the strongest manner possible that in this matter of indirect or overhead costs there is no desire or effort on the part of the medical schools to secure unearned general financial assistance. The medical schools simply wish to be reimbursed for the full out-of-pocket cost of the research they are performing in the national interest and for the benefit of humanity. This they do not receive under the present limitation of 15 percent for indirect costs.

The medical schools heartily agree that "funds appropriated to the National Institutes of Health are not for the purpose of general assistance to medical schools." They do believe that the present limitation is unfair to the schools. Medical schools and research institutions request these research grants in response to the wish of the National Institutes of Health, and, hence, of Congress which appropriates the money.

No one questions the value and importance of medical research. To it we owe most of our modern wonders in the field of health. It is expanding rapidly and must expand if we are to take fullest advantage

of the blessings of science. The medical schools are responsible for by far the greatest part of this research and are being called on increasingly to do more. They have and will respond to the best of their ability. But medical schools have other obligations equally important; above all, teaching. They are hard pressed for funds to maintain, improve, and enlarge their teaching programs. Such funds as they are required to pay out for indirect costs of sponsored research can come only from their general income, already stretched to dangerously near the breaking point. A considerable part of the general income of the medical schools is from tuition, already disturbingly high. To contribute to the indirect costs of Government-sponsored research from tuition is, in effect, to subsidize such research from the pockets of the students.

I think that the percentage of the total hard-money income of these institutions that goes to pay for indirect research costs is of particular significance. When translated into the drain on these funds, 4.2 to 21.6 percent, $73,000 to $374,000, for example, is not an inconsequential figure.

POSSIBLE CUTS IN RESEARCH PROJECTS

It has been stated that unless the total NIH budget was increased, the provision of the $68 million needed to satisfy the payment of indirect costs to the medical schools would cut down on the number of research projects that could be financed.

This might be true, but if the NIH is to continue to support medical research from year to year, and, in doing so, in effect, continue to compel the medical schools and universities to contribute to this effort from their educational funds, the elimination of this inequity is by far the least of two evils.

Senator PASTORE. As a matter of fact, it would cut down unless you raised the figure. You say it might. It would.

Mr. YOUMANS. That is right.

The fact is that the medical schools, struggling to maintain themselves, should not be required to use their own limited funds for the indirect costs of this research, money which they cannot afford and and which impairs their ability to maintain an adequate program of medical education. It is not only fair and just that the medical schools be reimbursed for the total cost of this research—it is also in the public interest.

(The tables previously referred to follow:)

TABLE I.—*Indirect cost allowances, U. S. Public Health Service compared with blue book formula, various universities, year ended June 30, 1957*

	Salaries and wages on USPHS research projects	Total direct expenditure subject to USPHS indirect cost allowances	USPHS indirect cost allowance on 15 percent of direct expenditures in column 2	Indirect cost rate based on bluebook formula	Indirect cost allowance based on bluebook formula	Portion of indirect cost not recovered through USPHS allowance		Indirect cost allowance rate required to recover indirect costs
						Amount	Percent of total	
				Percent				
Chicago, University of	$820,400	$1,106,700	$175,005	39.33	$322,663	$147,658	45.76	27.66
Columbia University	1,397,334	[1] —1,758,260	263,739	34.00	475,094	211,355	44.49	27.02
Harvard University	(2)	2,704,626	465,694	[3] 32.70	[3] 884,413	478,719	54.13	32.70
Indiana University	218,239	300,456	45,068	48.00	104,755	59,687	56.98	34.87
Minnesota, University of	756,696	1,113,852	167,078	45.10	341,270	174,192	51.04	30.64
New York University	849,295	1,171,711	175,757	49.50	420,601	244,644	58.19	35.88
Northwestern University	420,249	600,018	90,003	43.39	[4] 173,609	83,606	48.16	28.93
Ohio State University	141,582	210,276	31,541	42.01	59,479	27,938	46.97	28.29
Stanford University	(1)	868,322	130,248	[4] 31.35	[4] 272,219	141,971	52.15	31.35
Washington, University of	581,015	940,507	141,076	52.03	302,302	161,226	53.33	32.14
Wisconsin, University of	507,832	820,816	123,122	31.00	157,428	34,306	21.79	19.18
Total		11,655,544	1,748,321		3,513,633	1,765,302	50.24	30.15

[1] Expenditures not subject to USPHS overhead allowance eliminated on an estimated basis.
[2] Not available.
[3] Bluebook indirect cost rate based on total direct costs. Rates for other universities based on direct salaries and wages.
[4] After adjustment for social-security taxes charged direct.

TABLE II.—*Utilization of general income funds of 5 university medical schools in connection with USPHS supported programs (availed of basis)*

	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
(*a*) Continuing general income:[1]												
University of Illinois	$864,087	$1,040,372	$1.369,727	$1,517,117	$1,600,334	$1,743,152	$1,596,950	$2,014,848	$2,182,231	$2,120,539	$2,377,822	$2,485,981
Duke University	564,757	666,849	728,461	747,688	732,231	744,861	799,690	855,429	937,417	1,003,660	1,066,281	1,083,424
Cornell University	984,652	1,084,171	1,140,414	1,112.214	1,127,419	1,229,510	1,282,508	1,357,379	1,509,811	1,519,140	1,563,894	1,735,721
New York University	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	[2] 1,347,239	----------
Harvard University	1,000,758	1,023,907	1,055,804	1.207,020	1,242,666	1.278,244	1,299,330	1,409,539	1,468,381	1,610,640	1,648,995	1,733,090
(*b*) Expended from PHS grants for direct costs:												
University of Illinois	----------	5,729	34,708	99,821	205,728	284,396	297,469	259,330	361,149	424,580	404,698	537,610
Duke University	9.357	50,840	66,385	126,088	216.872	230,971	236,157	240,753	263,180	332.545	354,638	619,497
Cornell University	7,823	4,214	17,934	304,949	295,300	367,932	404,828	435,559	485,694	575.174	795,752	881,467
New York University	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	[2] 1,171,711	----------
Harvard University	23,085	111,660	238,061	299,588	364,522	523,699	575,796	717,249	935,537	1,015,260	1,326,500	1,737,334
(*c*) Total indirect costs of the expenditures under (*b*) computed on basis of Mills formula:												
University of Illinois	----------	1,425	11,189	32,175	69,687	81,500	87,264	82,264	102,456	117,510	136,857	185,623
Duke University	2,185	8,315	18,639	36,344	89,337	64,837	61,130	64,779	66,544	87,767	76,647	137,627
Cornell University	3,076	1,264	5,380	98,790	95,670	119,214	131,143	141,077	162,871	186,322	239,913	303,947
New York University	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	[2] 419,884	----------
Harvard University	8,311	39,081	82,621	104,856	127,583	183,293	202,529	262,037	328,438	355,341	464,275	608,067
(*d*) Contribution from PHS to indirect costs:												
University of Illinois	----------	458	2,777	7,986	16,458	22,752	23,798	20,746	28,892	33,966	60,705	80,641
Duke University	----------	----------	7,611	10,063	18,893	21,151	20,082	15,796	28,995	27,485	23,520	63,884
Cornell University	579	312	1,330	24,350	23,600	29,450	32,320	34,700	39,210	45,900	103,960	131,690
New York University	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	[2] 173,528	----------
Harvard University	----------	3,182	10,132	12,699	17,599	32,911	36,905	95,272	72,639	77,808	145,445	233,160
(*e*) Remainder of indirect costs met by medical school from general income:												
University of Illinois	----------	967	8,412	24,189	53,229	58,748	63,466	61,518	73,564	83,544	76,152	104,982
Duke University	2,185	8,315	11,028	26,281	70,444	43,686	41,048	48,983	37,509	60,282	52,527	73,743
Cornell University	2,497	2,948	4,050	74,440	72.070	89,764	98,823	106,377	123,661	140,422	133,953	172,257
New York University	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	[2] 244,356	----------
Harvard University	8,311	35,899	72,489	92,187	109,984	150,384	165,624	166,763	235,799	277,443	318,880	374,907
(*f*) (*e*) as percentage of (*a*):												
University of Illinois	----------	0.09	0.6	1.6	3.3	3.4	3.3	3.1	3.4	3.9	3.2	4.2
Duke University	0.40	1.25	1.51	3.51	9.62	5.86	5.13	5.73	4.01	6.01	4.93	6.81
Cornell University	.25	.27	.35	6.6	6.4	6.9	7.6	7.8	8.2	9.2	8.6	9.9
New York University	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	[2] 18.1	----------
Harvard University	0.8	3.5	6.9	7.6	8.9	11.8	12.7	11.8	17.4	17.2	19.3	21.6

[1] Income from all sources (includes endowment ncome, tuition income, State appropriations, etc.; excludes gifts, contracts, contributions).

[2] These figures taken from a report submitted by New York University entitled "The Effect of 15-percent Congressional Limits and the Proposed 25-percent Public Health Participation in Indirect Costs Incurred by New York University in the Performance of USPHS Research Grants," dated Oct. 3, 1957.

VIEW OF SUBCOMMITTEE

Senator PASTORE. Doctor, you realize, of course, that this subcommittee has been rather sympathetic to the point you are making there this morning.

Mr. YOUMANS. Yes, sir.

Senator PASTORE. As a matter of fact, in the report last year we said:

> It is the consensus of the committee that indirect costs are as much a part of the total cost of research as are direct costs. There is no such evidence available, however, to establish a fixed percentage at this time. For this reason the committee would request the General Accounting Office to conduct a study of this matter and render a report by January 1, 1958.

That study was never ordered for the simple reason that we went to conference, and the position of the House was sustained. And I would say that you have already testified before the House, and there appeared to be rather adamant opposition because in their bill they have reported out identically the same thing they did last year.

Under those circumstances, what do you suggest?

Mr. YOUMANS. I suggest that you use your influence to convert them to the idea that the full costs should be paid.

Senator PASTORE. I think you made a very substantial point. I think that the medical schools are to be complimented that, even in spite of their position that has been repudiated from time to time, they have always shown a willingness to continue these research projects, even at the cost of subsidizing to some extent for indirect costs, which is a matter that is to be applauded.

But, as a practical proposition, I think we will have to wrestle with it again.

I think you make a good point.

Senator Stennis?

Senator STENNIS. I yield to Senator Smith.

Senator SMITH. No, indeed. Thank you very much.

STUDY MADE OF SITUATION

Senator STENNIS. Has there been any inquiry made, Mr. Chairman or Doctor, as far as you know, of the General Accounting Office since the General Accounting Office did make this study?

Senator PASTORE. I think Mr. Downey might answer that.

Mr. DOWNEY. A study was made by the Budget Bureau, the General Accounting Office, and the National Science Foundation. They recommended the full payment of the indirect costs.

Senator STENNIS. The full payment as to each project?

Mr. DOWNEY. Yes, sir.

Senator STENNIS. It would be rather difficult to sustain that, would it not? There is no formula by which you can determine the indirect costs, is there?

Mr. YOUMANS. The bluebook formula is quite satisfactory, and we have a situation where some agencies of Government are using this formula and are paying the full costs. But the National Institutes of Health are not.

Senator STENNIS. That bluebook formula, Mr. Downey, that they recommended.

Mr. DOWNEY. I am not familiar with the bluebook formula.

My discussion with the General Accounting Office was that they were opposed to the payment of a flat percentage—25 percent was the figure used last year—and that the costs should be negotiated rather than on a percentage basis.

Mr. YOUMANS. May I comment on that, Mr. Chairman?

Senator PASTORE. Yes.

BLUEBOOK FORMULA

Mr. YOUMANS. The bluebook formula is the one in which there is negotiation, and the indirect costs are negotiated on the basis of certain factors.

Senator PASTORE. Yes, but I think the last time you asked for an increase of 25 percent.

Mr. DOWNEY. The Department of Health, Education, and Welfare and the National Institutes of Health proposed to pay 25 percent.

Senator PASTORE. Which is 10 percent more than the 15 percent already allowed by the House.

I notice from the bluebook formula, with relation to these very important medical schools, that in no instance is it less than 21 percent. So even the 25 percent would be satisfactory.

Mr. YOUMANS. Yes.

Senator PASTORE. The contention you make here today, that the bluebook formula that sets the overall indirect costs on the part of the university, irrespective of these grants, is the amount that should be allowed for administrative purposes. Am I correct in that?

Mr. YOUMANS. No, sir, not if I understood your point.

Senator PASTORE. The bluebook formula is nothing more than the overall administrative direct costs that are sustained by the medical school itself, is it not?

Mr. YOUMANS. No, sir. It refers particularly to the type of research which is being done under specific grants. But it can give you the overall cost of what is done in the university in the way of research.

However, you naturally would have a different formula, a different percentage, depending upon whether you were having research in a project which involved no apparatus and that sort of thing.

Senator PASTORE. For the purpose of the record then and in line with the questioning already conducted by Senator Stennis, how do you get this formula?

STATEMENT OF PRINCIPLE

Mr. YOUMANS. That is a statement of principle for paying overall costs adopted by the Army and Navy in 1948 and has been used subsequently by other agencies of the Government in paying the indirect costs. It is available in the form of a statement which I believe I have here.

Here is the bluebook, sir, Shall I read some of it for you?

Senator PASTORE. No; only those parts that you think might be enlightening to us.

Mr. YOUMANS. Let me say, first, that it is entitled "Explanation of Principles for Determination of Costs Under Government Research and Development Contracts With Educational Institutions." Then it lists the various types of costs which are taken into consideration,

both for direct and for indirect, and under direct costs, as you can imagine and as I have already said, there are direct salaries and wages and materials and supplies, shipping charges, communication tolls, and that sort of thing. And under indirect expenses: general administration and general expenses, group insurance, operation of library, operation and maintenance of physical plant, use of building and equipment.

When the negotiations are carried out, these various costs are broken down in connection with the operation of the schools.

Senator PASTORE. Do you not see any distinction at all between the one that is suggested there in the Army and Navy Departments against these medical research programs?

Mr. YOUMANS. Yes, I think there is a distinction, but I think it is taken care of in the negotiation.

Senator PASTORE. That is what we are getting at. It would still have to be a matter of negotiation.

Mr. YOUMANS. Yes.

Senator PASTORE. Because I am afraid if we begin to take the position that this is in the formula, that is going to be a little more burdensome than it already is.

Senator STENNIS. Mr. Chairman, I am certainly far from an expert on it, but I agree with Senator Pastore. I believe you are just getting into deeper water when you go wading off in a formula of that kind.

I do not think this committee or any congressional committee is is going to be inclined to adopt this negotiation matter in all fields with the services.

POSSIBILITY OF FAIR PERCENTAGE

I believe if you could strike a fair percentage that is higher than the 15 percent and come in here with a firm recommendation from several of your groups, a cross section of the country, then you would give us something to stand on. I do not know what it would be—30 percent, 25 percent, or whatever you think is fair.

The committees are not inclined to turn this loose and negotiate in one place under one standard and another place under another standard and cause confusion and complaints to come rolling in and one section of the country thinks they get an advantage over the other.

I am fairly familiar with some of the things that come up in this service matter. So I strongly recommend that you come in with a final figure here.

Mr. YOUMANS. We recognize that. We understand that. We think that a figure of 30 percent would be acceptable.

Senator STENNIS. Is that generally agreed upon by the medical schools?

Mr. YOUMANS. Yes, sir, I think that is correct; yes, sir.

Senator STENNIS. That is all I have, Mr. Chairman.

Senator PASTORE. Senator Smith?

Senator SMITH. I have no questions.

Senator PASTORE. Thank you very much.

Mr. YOUMANS. Thank you very much.

24089—58——99

(Dr. Youmans later submitted the following letter supplementing his testimony:)

ASSOCIATION OF AMERICAN MEDICAL COLLEGES,
Evanston, Ill., May 17, 1958.

Hon. LISTER HILL,
The United States Senate,
Washington, D. C.

MY DEAR SENATOR HILL: At yesterday morning's hearing there was considerable discussion as to what an overall percentage figure would be which, when contrasted with the present allowance of 15 percent, would make adequate provision for the indirect costs of research grants sponsored by the National Institutes of Health. I indicated that actual studies had shown this to vary from institution to institution, with 30 percent being the minimum.

I should have added, however, that even with this being so, those responsible for the administration of our universities and medical schools had settled upon a figure of 25 percent as being satisfactory. Consequently, as far as my testimony is concerned, I believe that 25 percent of each grant should replace the present 15 percent as representing the allowance for indirect costs.

Sincerely yours,

JOHN B. YOUMANS, M. D.

LETTER TO SENATOR CAPEHART

Senator PASTORE. Senator Hayden, chairman of this committee, has received a letter from Senator Capehart transmitting a letter addressed to him by Dr. Frederick L. Hovde, president, Purdue University, recommending removal of section 207 from the bill. Both Senator Capehart's letter and Dr. Hovde's will become a part of the record at this point.

(The letters referred to follow:)

UNITED STATES SENATE,
Washington, D. C., May 14, 1958.

Hon. CARL HAYDEN,
Chairman, Senate Appropriations Committee,
Senate Office Building, Washington, D. C.

DEAR MR. CHAIRMAN: Enclosed is a letter from the Honorable Frederic L. Hovde, president of Purdue University, relating to section 207 of H. R. 11645 which is self-explanatory.

I agree with the position of President Hovde and will appreciate any consideration given to this matter by the committee.

Best personal regards.

Sincerely,

HOMER E. CAPEHART.

PURDUE UNIVERSITY,
Lafayette, Ind., April 10, 1958.

Hon. HOMER E. CAPEHART,
The United States Senate, Washington, D. C.

MY DEAR SENATOR CAPEHART: Recently the House of Representatives voted approval of the appropriation bill for the Department of Health, Education, and Welfare. That bill contains a rider (sec. 207) which states: "None of the funds provided herein shall be used to pay any recipient of a grant for the conduct of a research project, an amount for indirect expenses in connection with such project in excess of 15 percent of the direct cost." Since most of the grants for basic research for the various divisions of the Department of Health, Education, and Welfare are made to universities, the application of this financial limitation is most incongruous because it acts to defeat the real purpose for which the bill itself was passed.

Presently before the Congress there is a multiplicity of bills to assist colleges and universities to improve the quality and increase the supply of scientists. There is practically unanimous agreement that one of the best ways to increase the supply of scientists and to encourage competent scientists to remain on the staffs of the universities is to increase the support of basic research programs.

The present rider on the bill, which would limit the indirect costs that can be paid to universities, has exactly the opposite effect.

If the universities must find and make available additional moneys to take care of indirect costs for the support of research financed by grants from the Department of Health, Education, and Welfare, such moneys must be taken from their other operations. The net result is to weaken the universities rather than to strengthen them.

I hope, therefore, that the Senate will consider the removal of this limitation. I strongly recommend that, whenever research is supported by any agency of Government by contract, grant, or gift, the indirect costs of such research programs be considered equal in importance to all direct costs of such programs. The fundamental purpose of the program in the first place is defeated if our universities find themselves in the strange position of not being able to accept grants for research on the grounds that they can't afford to accept such grants.

Yours cordially,

FREDERICK L. HOVDE, *President.*

Senator PASTORE. Now we are honored to have Mr. Mansfield.

ROCKY MOUNTAIN LABORATORY, HAMILTON, MONT.

STATEMENT OF HON. MIKE MANSFIELD, A UNITED STATES SENATOR FROM THE STATE OF MONTANA

CONSTRUCTION FUNDS

Senator MANSFIELD. Mr. Chairman, I must apologize for being late, but I went to another committee meeting, and all the members started talking about how many meetings they each attend, and I suddenly realized that I had a statement to make before this committee.

Mr. Chairman and members of the committee, yesterday my distinguished colleague Senator James E. Murray appeared before your subcommittee in behalf of funds for the construction of an animal house at the Rocky Mountain Laboratory at Hamilton, Mont., which is, incidentally, one of the best research institutes in the world. And he also requested an increase in the funds being appropriated for Indian health programs.

I want to take this brief opportunity to express my complete support of the statement presented to you by Senator Murray.

ANIMAL HOUSE NEEDED

It had just recently come to our attention that plans were being formulated for the construction of an animal house at the Rocky Mountain Laboratory which is a badly needed and important facility in research being carried on by the National Institute for Allergy and Infectious Diseases. There is no space to have this work carried on at Bethesda, and Montana has personnel highly skilled in this field. The Rocky Mountain Laboratory has an excellent record in accomplishments in the field of vaccine. I hope that the committee will see fit to grant $150,000 for this project.

INDIAN HEALTH PROGRAM

In regard to funds for the Division of Indian Health, I would like to say that they have done a good job in improving health conditions among our Indians since they took over the program several years ago. But they have a long way to go to bring Indian health standards

up to the proper level, and to do this the Department is going to need more money than is being requested in their budget.

Last year the Montana delegation was quite active in getting congressional approval of Public Law 151, which would provide Federal assistance for the construction of Indian community hospitals. This cooperative program will allow community hospitals to provide facilities for Indians so that it will not be necessary to have two individual units. The Federal Government will contribute its share for the Indian patients. The $750,000 included in this bill by the House is hardly enough to meet the immediate needs of this program.

There are two Indian community hospital projects in the State of Montana, one at Polson and one at Wolf Point and Poplar, Mont. Neither of these sorely needed hospitals will be constructed in the next fiscal year if this appropriation is not increased.

I am in complete accord with Senator Murray's recommendations that funds for Public Law 151 be increased by $1 million. As you know, Montana has seven Indian reservations, each with their different and distinct problems. These people are important citizens of our State, and I feel that it is extremely important that sufficient funds be appropriated to meet their health needs.

Mr. Chairman and members of the committee, I appreciate the opportunity to speak briefly this morning, and I know the committee, as always, will act wisely in these matters.

Senator PASTORE. It is always a great pleasure to have the distinguished Senator from Montana with us.

Senator CLARK. Thank you.

Senator PASTORE. Any questions?

Senator STENNIS. No, sir.

Senator SMITH. I do not have any questions, thank you.

Senator PASTORE. Thank you very much.

Senator PASTORE. Dr. Philip Handler.

You may take a seat right there.

FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY

STATEMENTS OF DR. PHILIP HANDLER, PROFESSOR OF BIOCHEMISTRY, DUKE UNIVERSITY; DR. CARROLL WILLIAMS, PROFESSOR OF BIOLOGY, HARVARD UNIVERSITY MEDICAL SCHOOL; AND DR. ROBERT A. ALDRICH, PROFESSOR OF PEDIATRICS, UNIVERSITY OF WASHINGTON MEDICAL SCHOOL

BASIC RESEARCH

Dr. HANDLER. I believe Dr. Aldrich wanted to speak briefly.

Senator PASTORE. All three of you gentlemen have the same subject. So you may all take seats. That includes Dr. Philip Handler, professor of biochemistry, Duke University; Dr. Carroll Williams, professor of biology, Harvard University; and Dr. Robert A. Aldrich, professor of pediatrics, University of Washington Medical School.

Dr. HANDLER. Mr. Chairman and members of the committee, I am Dr. Handler. I am professor and chairman of the department of biochemistry at Duke University School of Medicine. I have been on the faculty of that school for 20 years now.

I am also the elected secretary of the American Society of Biochemists. This society is 1 of 6 scientific societies banded together just for administrative purposes as the Federation of American Societies for Experimental Biology, and, as the secretary of the Biochemistry Society, I am a member of the governing board of this federation, and I appear before you as the representative of this board.

PREPARED STATEMENT

I have a statement which is perhaps too long to read.

Senator PASTORE. We will insert it in the record, and then you can explain it in your own way.

(The statement referred to follows:)

STATEMENT BY DR. PHILIP HANDLER, REPRESENTING THE FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY (AMERICAN PHYSIOLOGICAL SOCIETY, AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS, AMERICAN SOCIETY FOR PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS, AMERICAN SOCIETY FOR EXPERIMENTAL PATHOLOGY, AMERICAN INSTITUTE OF NUTRITION, AND AMERICAN ASSOCIATION OF IMMUNOLOGISTS)

BACKGROUND

Dr. Handler is professor and chairman of the department of biochemistry at Duke University School of Medicine. He is the elected secretary of the American Society of Biological Chemists and a member of the governing board of the Federation of American Societies for Experimental Biology.

SUMMARY

The Federation of American Societies for Experimental Biology strongly urges that within a budget of the National Institutes of Health, there be included for fiscal 1959, at least $20 million for fundamental research projects and $10 million for training grants in the basic medical and biological sciences, under the title of "General Research and Services, National Institutes of Health."

Our reasons are as follows:

Clinical medicine is the application to man of the findings of fundamental research. Applied medical research, quite properly, has been supported on an expanded scale but, unfortunately, without a proportional expansion of fundamental research. In consequence, fruitful clinical investigation may shortly have gone as far as our basic knowledge of biology permits. It is therefore imperative that fundamental research be adequately supported also. Such research can be conducted only by those soundly trained in one of the basic scientific disciplines and such individuals are even now in short supply.

Adequate support of these fundamental programs of research and training is difficult and not always appropriate from the budgets of the categorical disease institutes whose councils are always confronted with the necessity of judging whether a given fundamental research proposal is germane to the disease in question. Such research must properly be judged on its own merits and not in relation to its potential application.

Accordingly we request that the Congress authorize increased support of research and training in the fundamental medical and related sciences as items in the budget of the National Institutes of Health under "General Research and Services," in addition to any appropriations granted for research or training in the categorical Institutes.

A STATEMENT CONCERNING THE NEED FOR SUPPORT OF GENERAL RESEARCH GRANTS AND GENERAL RESEARCH TRAINING GRANTS OF THE NATIONAL INSTITUTES OF HEALTH IN FISCAL YEAR 1959

Mr. Chairman and honored members of the committee, may I express my appreciation for this opportunity to appear before you as representative of the Federation of American Societies for Experimental Biology.

The governing board of the federation, of which I am a member, has asked me to serve as its spokesman to state our reasons for supporting the request that in-

creased funds be made available to the National Institutes of Health for its general research and services program in the basic medical sciences.

Perhaps, I should first state some general facts concerning the Federation of American Societies for Experimental Biology. This federation is composed of the individual national societies for six sciences, biochemistry, physiology, pharmacology and experimental therapeutics, experimental pathology, immunology, and nutrition. The 5,800 members of the federation are all senior investigators who have made independent meritorious contributions to the research literature of their respective disciplines. There are approximately 10,000 other professionally trained American investigators in the areas represented by these societies who have not met the rigorous requirements for membership.

The membership of these societies is drawn in large part from those members of medical-school faculties responsibile for the teaching of the preclinical medical sciences, those fundamental disciplines with which the medical student is occupied in the first half of the usual medical curriculum. In addition, our membership also includes scientists employed in research institutes, hospitals, Federal laboratories, and in university laboratories outside of the medical schools.

Our members have watched with admiration and respect the development of the National Institutes of Health within the Public Health Service. When this program was initiated, there existed in medical schools, hospitals, research institutes, etc., a corps of trained clinicians whose research efforts were seriously restricted for lack of supporting funds. The research-grants program, by providing additional technical help, supplies, and apparatus, has since made it possible for these investigators to work at the top of their capacities.

The program has had yet another effect. It stimulated the development of a new and flourishing industry for the design and fabrication of scientific equipment. This pattern is familiar to all of us in the field of atomic energy, where basic science has given birth to a vast effort in special scientific equipment. On a somewhat lesser scale, the same thing has occurred in the field of medical research. Moreover, the products of this new industry will lead to further progress in medical research, for the history of science demonstrates clearly that the acquisition of new and useful information is tied to the development of apparatus and technique.

We have mentioned the accomplishments of the research-grants program in providing funds to support the existing body of medical investigators. It later became apparent that an additional limiting factor in medical research was the physical space to house this activity. The health research facilities program, for which the Congress has appropriated $30 million for each of 3 years, has begun to meet this need. We are all justifiably proud of these accomplishments.

But today, gentlemen, I have been sent to discuss with you what we consider to be our most urgent and critical needs. The limiting factors in medical progress will soon be our fund of fundamental biological information and the supply of investigators in the fundamental medical and biological sciences. These are problems of which scientists, the administrators of the National Institutes of Health, and the Congress have been aware for some time. The present request does not represent a reaction to sputniks, either with or without experimental dogs. The serious need for basic information and for training new personnel in medical research was foreseen years ago, in the planning of the National Institutes of Health. Basic research has received some support from the funds available to the councils of the categorical disease institutes and there are both a fellowship program and institutional grants for specialized training in cancer, heart disease, diabetes, and mental health.

The latter programs were largely designed to train young physicians in these specialized areas and to interest them in the possibilities of careers in research as clinical investigators.

But we have not yet honestly confronted either of the very serious problems now before us. Let me explain.

The practitioner of medicine or surgery is engaged in the practical application of that body of knowledge encompassed in the basic medical disciplines. Just as the engineer must utilize the fundamental information obtained by research physicists and chemists, the clinical investigator applies the information and techniques provided by the research of investigators in the basic medical and related sciences.

The investigator in the clinic must bring to bear upon his problem the tools, knowledge, and philosophy of the various basic medical disciplines. Whether he be studying cancer, heart disease, or diabetes, he is, at any given moment, an applied physiologist, pharmacologist, cytologist, biochemist, etc. He cannot, himself, be expert in each of these disciplines. Indeed, it is extremely unlikely

that he can be truly expert in even one of these basic disciplines. Hence, he must depend upon others. It is the research of those who spend their lives in these basic scientific disciplines which provides the fundamental information essential to an understanding of the normal human and of those aberrations from the norm which we call disease. Basic research is the very lifeline of medicine.

It is basic biological research which has been responsible for the major breakthroughs and new advances in our information about health and disease. This is reflected in the fact that the membership of the federation includes twenty Nobel prize laureates. Although these distinguished investigators are usually described in the press as "medical scientists," evoking the image of a man with a stethoscope in his pocket, they are, in point of fact, working biochemists, microbiologists, immunologists, physiologists, geneticists, or pathologists, etc.

It is imperative to this discussion that we clearly distinguish between clinical investigation, addressed to the problems posed by a specific disease, and the fundamental research with which we are here concerned. Let me illustrate.

It was these basic scientists who discovered and identified each of the vitamins. More than 25 years of fundamental research resulted in the isolation and demonstration of the nature of viruses and the development of means of growing viruses in culture. Not until then could Dr. Salk undertake to prepare his vaccine. Twenty-five years of studying the chemistry and physiology of the adrenal gland by physiologists and biochemists provided a supply of cortisone and sufficient understanding of its function to permit Dr. Hench to test the effect of cortisone in arthritics. It was fundamental research which turned up the first antibiotics and continues to find new ones, which found lifesaving hormones like insulin and thyroxin, which discovered that human blood occurs in types, so that transfusions became possible. Fundamental studies of the nature and behavior of body fluids ultimately led to modern therapy so that neither diabetics nor infants with diarrhea need die of what is called dehydration. Physicochemical studies of blood yielded the albumin which prevents shock in the wounded and in patients undregoing surgery. And, as a byproduct of this effort, we obtained blood-clotting agents of enormous value in various clinical circumstances. Laboratory workers have recently given the world the Rauwolfia drugs of immense value in the treatment of hypertensive disease. When carefully and appropriately employed, the new tranquilizing drugs alone will more than repay the cost of the National Institutes of Health, simply by shortening the stay of patients in our institutions for the mentally ill.

Recent fundamental research has revealed the structure and synthesized hormones of the pituitary gland, has elucidated the mechanisms involved in the function of the kidney, has discovered some of the basic mechanisms involved in cellular reproduction, as well as those involved in the transmsision of the nervous impulse. Yet other basic scientists have begun to understand why fatty materials deposit on the walls of arteries, which results in a form of heart disease. Only when this process is fully understood can we hope to prevent this disease. Still other scientists, trained not as cancer specialists but in one or another of the basic disciplines, are narrowing down the elusive problem of the difference between a cancer cell and a normal cell—our hope of ultimately finding a rational basis for cancer chemotherapy. Impressive as it is, this is but a partial list, and can be expanded many times. Moreover, there are many indications that all this has been only a prelude to a great golden era in biological research. Preliminary reports strongly suggest that the time is at hand when we may soon expect to learn the intimate details of such diverse processes as the mechanisms involved in genetics, how antibodies are made, and the workings of the nervous system. What these discoveries hold for the future of humanity, none can say at this moment. But that they will enrich and prolong our children's lives, and perhaps ours as well, is absolutely inevitable.

The request we would make is that you provide funds to support basic biological research at a level significantly above what is possible when funds must be derived from the budget of one of the categorical disease Institutes. As matters stand, when meritorious requests for research support exceed the funds available, the advisory councils have always awarded grants to disease-oriented clinical research, and fundamental investigators have gone without support. But these clinical investigators have now gone almost as far as available fundamental knowledge permits. Future progress is utterly dependent upon increased fundamental research activity.

Moreover, it is imperative that the scientists so engaged reproduce themselves, as it were, by training young people in the basic scientific disciplines.

These discoveries have been made in the laboratories of devoted men, dedicated to a search for the secrets of living things. That their devotion and skill has

enriched the lives of their fellow men is entirely clear. The result of their probing curiosity is the very knowledge we need to understand and combat disease. Similarly, it was Faraday's curiosity about the nature of electricity that ultimately made electricity our everyday servant. Carrother's curiosity about certain organic compounds gave us nylon, to say nothing of the curiosity of Einstein, Bohr, Fermi, and Meitner about the nature of the universe which gave us atomic energy.

Unfortunately, curiosity is not enough. As a research tool, curiosity must be sharpened, focused by long years of rigid training. Such training normally leads to the degree of doctor of philosophy and must include at least a year or two of intensive postdoctoral research experience in the laboratory of an accomplished investigator. During these years the student acquires familiarity with the laboratory technics of his discipline. But more important is the slow process of being steeped in its history and lore, gradully learning scientific method, sharpening his powers of observation, and correlating seemingly unrelated facts and concepts until, almost unconsciously, he becomes a scientist. It is important to realize that he is now not a cancer, heart, or diabetes specialist; he is a biochemist, embryologist, or immunologist, etc. At this time it appears to be the supply of young investigators so trained which limits the rate of progress in medical research.

Not only our level of scientific information, but the supply of such young investigators is inadequate to meet current demands. For example, at the annual meeting of this federation last month in Philadelphia, our placement bureau handled approximately 600 young people in search of either their first or new positions while at the same time considering almost three times as many requests from prospective employers. These potential employers represented medical schools, hospitals, research institutes, and the pharmaceutical industry. Although the result of this activity was almost spectacular—approximately 85 percent of the applicants for positions were successful, a most remarkable record for any employment bureau—the fact remains that there were no candidates for two-thirds of the available positions.

Nor is this by any means the total of the unfilled positions at this time. In the academic world, prospective employers usually communicate directly with professors engaged in training young investigators and inquire as to whether they have available a suitable candidate for a specific post. Unfortunately, there are no statistics to indicate the number of such inquiries which have not been satisfactorily met. As an indication, I might mention that at a recent meeting of the council of the Biochemistry Society, this group of only 8 members recounted from their own personal experience, more than 50 requests for newly trained investigators which they had not been able to fill during the previous year. Indeed, I have a file of about 20 such requests addressed to me within the last few months but long after my young people had been placed in positions for the coming year. These few figures must be multiplied by the hundreds of other professors engaged in such training to assess the magnitude of the gap between available positions and available trained young investigators.

Yet another problem must be considered in this context. There has been much discussion of the adequacy of the supply of physicians in the United States. Even those who contend that the present supply is ample to meet the health needs of our Nation admit that the explosive increase in our population will soon outstrip the supply of physicians and that the current annual rate of production by our medical schools will be inadequate. Whether an increased supply of physicians is to be provided by creation of new medical schools or by expansion of the activities of the present schools, and regardless of the source of funds to underwrite this activity, to maintain the present quality of medical education a proportionate increase in the size of the preclinical faculties of our medical schools is absolutely essential.

This group—teachers and investigators—is indeed one and the same. When a member of the preclinical faculty of a medical school is not teaching, he is usually engaged in research. Indeed, in the more fortunately placed medical schools it is likely that 80 percent of the time of the typical preclinical professor is spent in research and in training others to do research. Clearly, the present shortage of investigators in the basic medical sciences will also mean a serious shortage in the supply of teachers for our medical schools. Indeed, in some disciplines these shortages are already desperate. There are few medical schools which do not presently have vacant faculty positions for biophysicists, pharmacologists, geneticists, anethesiologists, or anatomists—positions which they are unable to fill for lack of suitably qualified candidates.

Are there young and interested students who do not currently undertake the long period of training necessary for lack of financial support? The answer must

be qualified in terms of the experience of individual departments engaged in such training and the specific disciplines concerned. At this time, biochemistry appears to be the most attractive of the basic medical disciplines. Each of the major departments engaged in training young biochemists currently receives more applications for such training than it can handle, for lack of space, staff, or supporting funds. If I may again cite our own department at Duke Medical School as an example, this past year we received 34 applications and were in position to accept but 6 of the applicants. Of those turned away, at least 12 submitted undergraduate college records which indicated that they could successfully undertake graduate training.

Some of the other basic disciplines do not appear quite as attractive to young potential scientists at the moment and the number of applications received, requesting such training, is frequently below the existing training capacity of our institutions in terms of staff and space. Since the need for such trained investigators is great, it is our hope that by minimizing the cost of such graduate training more youngsters will be drawn to careers in these areas. For this training is expensive. Unless some form of subsidy is provided, only a rare student can afford such protracted education with the expenses borne from his own or his family's pocket. The financial rewards in later life are not great and it is unrealistic to expect these youngsters or their families to go into debt in order to finance the necessary 5 years of graduate training after the expenses of a college education.

Moreover, training and research of this type is also expensive to the university so engaged. Each scientist and student requires space, costly equipment, and consumable supplies. There must be close and frequent contact between the student and his mentor, a practice which automatically limits the number of students whose work can be directed by a professor at any one time. Clearly, such research and training represent serious financial drains on the university and in their present financial circumstances, universities cannot expand these activities from their own resources. Many universities presently have sufficient space to house an expanded training and research program in the medical and biological sciences and most, but not all of these, have on hand a sufficient staff to increase such activity. The limiting factor in most instances, therefore, appears to be the other necessary operational funds, i. e., fellowships, and the cost of equipment and supplies. It is primarily these expenses which would be borne by grants made under the proposed program.

If we, as a Nation, fail to recruit and train a sufficient proportion of our best young brains in these medical and related biological sciences and to support their research activity, then your future appropriation of funds for research in the dread diseases or for construction of medical research laboratories will be in vain. The intent of the Congress to support medical research has been tangibly expressed by its appropriations for the National Institutes of Health since World War II. If such funds are to be fruitfully spent in future years it is essential that steps be taken to insure a supply of investigators who can use such funds with intelligence and skill as they probe nature's secrets and to support them as they seek to replenish the well of basic information which has been almost drained by clinical investigation. Since the average time of such graduate training is 5 years, it will be at least 5 years before the effects of the proposed training programs may be felt. It would be most unfortunate to delay the inception of such programs to that day when the shortages which we have discussed become even more pronounced.

Accordingly, I come before you to ask that appropriations for the National Institutes of Health for fiscal year 1959 include, under its general research and services program, at least $20 million to support fundamental research projects in the medical and biological sciences, and at least $10 million to support research training grants programs in these sciences.

Unsolicited applications for such training grants have been addressed with increasing frequency to the National Institutes of Health. Like all applications for extramural funds, these have been reviewed by a group of consultants, in this case the General Research Training Committee. At its meeting earlier this week, this committee, of which I am a member, drafted a resolution, directed to Surgeon General Burney through Dr. Shannon, Director of the National Institutes of Health. I trust that this resolution will soon come to your attention through appropriate channels. The import of this resolution was to the effect that the committee wished unanimously to express its conviction that the research training grant program was one of the most important endeavors of the National Institutes of Health because it would furnish the trained scientific manpower upon which all other programs of the National Institutes of Health were crucially

dependent. In addition, the committee agreed that this new training program by its organization outside of the categorical Institutes possessed the necessary freedom and flexibility not otherwise obtainable. Further, the committee was impressed by the increasing volume of excellent and well considered applications that indicated the immediate need of increased support in fiscal year 1959 and support thereafter by an annual budget in excess of $15 million to $20 million in order that this crucial national program be given adequate support and continuity. Lastly, the committee unanimously agreed that this program should be given forthwith top financial priority.

These funds would not be distributed on an across-the-board, institutional basis, but would be granted only to those applicants, individuals or departments, judged by their peers to have a demonstrated record of success in research and in the training of such personnel or to have so rearranged their local circumstances as to augur well for the future. This program is warmly endorsed by the societies which together comprise the Federation of American Societies for Experimental Biology. We strongly urge that this request be granted. In the long run, it is not bricks or apparatus which make for medical progress—it is brains. We ask, therefore, that you help us in this most worthy cause—the continuing struggle for improvement in the health of our people.

SUPPORT OF RESEARCH

Dr. HANDLER. I have been asked to appear before you to appeal for a rather direct and honest approach to the problem of supporting fundamental biological and medical research.

This was not intended as an indictment of the way we now do things; nothing of the sort. But in the years in which we have learned to admire the growth and development of the National Institutes of Health we have become somewhat apprehensive about the fact that the bulk of the funds available, both inside the NIH for the intramural and its extramural research grants program, have gone to what we consider to be applied research—applied in the sense that the research which has been supported has been directly applied to the problems posed by a group of preset diseases. Important diseases, we grant immediately.

On the other hand, such research we consider to be applied and is the equivalent, if you will, of engineering as related to physics. It therefore must be drawn from that body of information developed by investigation in the fundamental medical and biological sciences, in order to be effective.

The large expansion in these clinical research activities has gone on now for almost 11 years, and we are entirely happy with this. We are enormously pleased. The time has come, however, when the situation may finally develop a particular kind of trouble.

The effectiveness of clinical researchers is dependent on the supply of fundamental information, and clinical investigators have been going to this well of fundamental information all these years. The well will shortly go dry unless we continue to replenish it somehow. This is really our thesis in this particular situation.

FUNDAMENTAL RESEARCH

Fundamental biological research is the real lifeline of medical research itself, and what we should like to see is more support for fundamental research.

In the 11 years of this program no group has appeared before you as far as I know to ask directly for support of the basic, fundamental research program. We cannot bring you an emotional appeal based

on heart disease or cancer or anything of the sort, but we do ask that you consider medical research in the same fashion that you have considered basic physics and the atomic energy program. They are entirely analogous situations.

I would be happy to document this if you wish, and, having seen Dr. Stanley walk in the room, I would like the opportunity to use Dr. Stanley as an illustration.

Senator PASTORE. Before we get to that, merely out of curiosity, how would this operate from a practical point of view?

Dr. HANDLER. Very simply. It is already in operation, sir.

Senator PASTORE. Who sustains it now?

Dr. HANDLER. The National Institutes of Health, but on a limited scale. There is presently within the budget of the National Institutes of Health in the general research and services program a line item, I believe, of the order of $9 million, for such general research projects which are not immediately and obviously directed toward cancer, heart disease, mental health and so forth. In addition, each year as you have appropriated funds for the categorical disease institutes, in each case you have been told that some fraction of these funds would be devoted to basic research, and this has been done. I cannot tell you to what extent. I do not know. But I am aware of what happens in the distribution of those funds, a phenomenon which is entirely natural and as it has to be. When, for example, there comes before a categorical council a large body of applications, these applications have already been reviewed by technical committees. The technical committees really illustrate the point I am making.

There is a technical committee on biochemistry, fundamental biology, or genetics or something of the sort because the people who do this research have been trained along disciplinary lines, and there is no other way we know to do real research.

APPROVED APPLICATIONS

These technical committees have approved or disapproved a large number of applications. The councils then review all of the applications which come before them. Every year the total of approved applications has exceeded the funds available.

The council then sits down with this long list of approvals and reexamines them. It finds that a large fraction of these are fundamental research, but it also has a directive to support mainly an area of disease-oriented research, and each time it is forced to make a decision between a project which is directly aimed at disease, and says so, and appears to be a meritorious one, and another project which cannot say directly "We are aimed at a disease. We hope the information we provide will be useful to those who wish to study cancer, heart, mental health, or epilepsy but we cannot guarantee this."

The council then has to "give the nod," if you will, to the direct approach.

Senator PASTORE. Why does it have to? Who is responsible for that? I want the record to show that.

Dr. HANDLER. I can't tell you who is responsible for all of this. I don't really know that. I can say that I have been aware, and the members of my organizations have been aware, that this has been

going on, and it relates to the very simple fact that the total of approved applications exceeds the funds available.

Senator PASTORE. In other words, if we raised the line item of $9 million to a sum larger, that would close in this gap that you speak of?

Dr. HANDLER. That is exactly what we would request.

AMOUNT REQESTED

Senator PASTORE. What are you specifically asking for?

Dr. HANDLER. $20 million.

Senator PASTORE. Instead of $9 million?

Dr. HANDLER. Yes, sir.

There is a corollary to this which we would ask at the same time.

Senator PASTORE. Do I understand you correctly, for the purpose of the record, that it is not a lack of appreciation or consciousness on the part of the National Institutes to recognize the need for this basic research; it is the fact that the money that is being provided is not sufficient to meet the need. Is that the point you make?

Dr. HANDLER. That is exactly so.

Senator THYE. Mr. Chairman, I would like to pursue that a little further.

Suppose you did have this increase. Where would the money be allocated, and to which division and to which institution?

Dr. HANDLER. It is in a line item in the budget, as I understand it. My understanding of these things is limited for the general research and services program of the National Institutes of Health.

USE OF INCREASED FUNDS

Senator THYE. What institution would be able to make use of the increased funds, and where would you or your association come in to render assistance in the field of research if such funds were allocated?

Dr. HANDLER. Specifically to which kind?

Senator THYE. That is right, because your statement so far is general. I could not support you if our committee were asked to make an explanation to the full committee.

You are before a subcommittee, and in the full committee we are going to have to prove our case or otherwise we will never win the argument.

Dr. HANDLER. May I do this by illustration, sir?

Senator THYE. Yes; I wish you would because I do not have the answer in my possession right now.

Dr. HANDLER. Let me explain it in several ways, if I may.

First, within the structure of a medical school. For example, there are two groups of professors. Dr. Aldrich represents one side and I another. He is a pediatrician, a member of the clinical faculty, and I am a biochemist. We represent basic research, if you will, within the structure of medical schools. There are people called biochemists, physiologists, pharmacologists, psychologists, biologists, and so on. Outside of the medical schools there are departments of biology and zoology which have done perfectly enormous, exciting things in recent years which have already an enormous impact on the future of medicine. These are the people to whom I refer, who need increased support of their research, which is not specifically applied medicine.

And may I now use Dr. Stanley as an example. He is a fine illustration of the point I would like to make.

Senator PASTORE. All right.

SALK VACCINE AS EXAMPLE

Dr. HANDLER. All of us were very excited just a short time ago when Dr. Salk prepared his vaccine which has been so successful.

I would like to point out that before Dr. Salk could ever even begin to undertake preparing that vaccine there was a long and arduous history, at least 25 to 30 years. It was necessary that these basic scientists, not worried by disease directly, first had to realize that there were viruses; second, to ponder their nature; and, third, to isolate them, to find out what they were.

Dr. Stanley, sitting over there in the corner, received the Nobel prize for having been the first man to isolate and purify a virus and tell the rest of us what viruses are. He did so by pointing out a virus which attacks not man but a plant. In so doing, he showed the rest of us how you isolate viruses in anything.

We would like to support Dr. Stanley and his equivalent when they are doing this research which is not immediately oriented toward a disease.

More recently, after Dr. Stanley and others began to worry about the problem of how you grow viruses when you want them, how do you make more of any virus, Dr. Enders received the Nobel prize for discovering how you can do this usefully and not until all of this was done could Dr. Salk begin to undertake his vaccine.

Senator THYE. What I am trying to do is to get in my mind the type of project to which the increased funds would be allocated in order to develop it. You are speaking beyond what I understand, and if I show ignorance here it is all because I am not familiar with the field that you are describing.

But where would the money go? You are speaking in general terms. Would it go to university X or college Z? Where would the money go? Under whose supervision would the money rest? That is what I am trying to get into?

Dr. HANDLER. It would go to Professor Jones at the university X, who is, by title, professor of something like physiology or zoology, who comes to the NIH and describes what he would like to do, and says "We think that this is an important aspect of our knowledge of living things, and it is important, we think, ultimately in the future of medicine that we know more about living things." He describes what he would like to do.

He is not a professor of medicine. He never sees patients.

It is the true history of medicine that every single important accomplishment that we know of in clinical medicine rests firmly on, the kind of thing that Professor Jones has done.

Senator PASTORE. Would this Professor Jones, to follow the line of the questioning by the Senator from Minnesota, be connected with a medical school?

Dr. HANDLER. He might be. He need not necessarily be.

Senator PASTORE. If he is not, where would he be?

Dr. HANDLER. In the departments of zoology or research institutes. But in a medical school half the faculty is in this other cate-

gory. More than half the faculty in my medical school are of the variety I am talking about—fundamental investigators. But our research is not supported the way that our clinical colleagues' is.

MEDICAL SCHOOL EXTRAMURAL SUPPORT

Senator PASTORE. How much did your institution get with this body of people that are engaged in the research that you speak of? How much money did you get last year?

Dr. HANDLER. Our total extramural support in our medical school was in the order of $1.8 million, if I am correct. Of this—I am afraid this is a "horseback" number—I would estimate that the order of $300,000 as a maximum was in the fundamental area.

Senator PASTORE. How was that given? To Duke University or to individuals?

Dr. HANDLER. Individual investigators.

Senator PASTORE. On application?

Dr. HANDLER. On application; the same way as it goes to the clinical research.

Senator PASTORE. Therefore, you are saying that the procedure is already set up; it is only a question of fulfilling more applications.

Dr. HANDLER. Yes, and segregating the funds so that it is protected against the encroachment of meritorious clinical research work.

Senator PASTORE. Would that not be administrative work on the part of the Council?

Dr. HANDLER. Not to the medical research institute but to the program you have already created, the $9 million you now have in this general research and services.

UNFULFILLED APPLICATIONS

Senator PASTORE. Have you any idea how many applications were submitted and not fulfilled?

Dr. HANDLER. There are on hand, of unpayable, approved applications, some $5 million.

Senator PASTORE. Applications that are already approved; the project is good and accepted, and the only trouble is they do not have the money.

Dr. HANDLER. There are no funds.

Senator PASTORE. How did you get the $20 million?

Dr. HANDLER. We took the $9 million and the $5 million, and the point is here of $9 million committed for next year, all those funds are already committed to investigators who previously applied and have been approved. There are $5 million of unpaid applications approved already.

Senator PASTORE. So you multiplied that by two.

Dr. HANDLER. I assume there will be more applications arriving during fiscal 1959.

Senator SMITH. Mr. Chairman, may I ask one question there?

I understood you to say that $300,000 of the last appropriation was received at Duke University for this kind of work.

Dr. HANDLER. A very rough estimate.

AMOUNT UNDER LARGER APPROPRIATION

Senator SMITH. What would the same project receive if it was a $20 million appropriation? Just an estimate.

Dr. HANDLER. No more than another $50,000 or $60,000 would come our way out of this.

Senator SMITH. So you still would not get a half million dollars.

Dr. HANDLER. No; I don't think so. I can't be certain of this.

Senator PASTORE. For the purpose of the record, why complain because apparently your applications at Duke have been fulfilled.

Dr. HANDLER. In the main, sir; yes. We have competed favorably for such funds.

This is based on the quality of our staff, if I may say so. It is also based on the fact that I think the figure I gave you is not all money derived from the NIH. Some of it comes from the Science Foundation and from private agencies, the Office of Naval Research, and so forth, and I have never seen the segregation of all of it.

May I speak to one other point in this connection?

Senator PASTORE. Are there any other questions on this point?

ENLARGING BASIC PROGRAM

Senator STENNIS. I just want to make this observation:

As I understand now, we have here a group of scientists and medical men asking expressly for an earmarking of funds for another group of scientists who are nonmedical men.

Dr. HANDLER. Yes, sir, precisely that.

Senator STENNIS. And still it is primarily medical research because what you are requesting is the basic foundation for the wall that you hope to build on top.

Dr. HANDLER. That is exactly right, and unless we replenish and continue to provide this basic information, clinical medical progress comes to a halt.

Senator STENNIS. As I understand, you already have the program that you need. You merely want an expansion and enlargement of that basic program.

Dr. HANDLER. Yes, sir.

There is a second facet of the same program, if I may speak to that.

Senator PASTORE. Yes.

Senator STENNIS. It is very impressive for him to come here in that way.

Dr. HANDLER. By the same token, if we are to expand such activity in the future of medical progress to accelerate it somewhat, we will have to train the people to do this.

GENERAL RESEARCH TRAINING PROGRAM

There is at the National Institutes of Health a general research training program. It comes under the same division of general research and services I believe in the budget of the National Institutes of Health.

For this year there was approved in the House in the order of $2.5 million for this item in the budget.

HISTORY OF ITEM

Once again, the same problem exists. This money is already committed. The history of this item is as follows:

Over the years there have been coming to the National Institutes of Health unsolicited applications from medical schools or subdivisions of medical schools, departments of biology and so forth, applications to help them train these fundamental investigators whom we have been discussing.

Until recently there was no means of providing such payments. The funds available to the categorical research institutes were requested and made available in this general research and services program to support such training programs, and this was to the extent so far of $2.5 million.

There are on hand, if I understand the figures correctly, approximately another $2.4 million of funds requested and approved, and by the toughest committee I have ever seen in approving such things.

I happen to be a member of this general training committee of consultants for institutes. This committee was extremely harsh. It approved a very small fraction of what came before it. Nevertheless, there are $2.4 million of requests approved and unpaid.

The House approved the request that came through in the special budget request. No one appeared before the House committee to ask for any expansion of this.

My group would like simple to request that you consider expanding this training program. We think it is utterly and completely essential.

REASONS FOR EXPANDING PROGRAM

There are two reasons for this: one is the obvious one, that we need these people. The training of such people is very expensive, sir, in the first place. It starts at the graduate level. You must already have paid for a college education. You now must go through at least 4 years of training, which usually leads to the degree of doctor of philosophy, and, these days, spend at least 1 or 2 years as a postdoctoral fellow in the laboratory of some well-qualified senior adviser.

The trainee or fellow must bear the costs out-of-pocket, or someone must help, but the future rewards are not very great financially, and to ask anyone to go into debt or expect his family to go into debt is rather unrealistic. They don't do it.

We are well aware of the number of people who come to ask for such help and don't get it.

If I might cite my own department as an example, last year, if I recall correctly, we had 34 applications by youngsters who wanted to undertake such training. We were in position to accept, for financial reasons, only six. Of those whom we were forced to decline at least 12 submitted undergraduate reports which indicated that they would do well in graduate school.

We could do nothing about this. This phenomenon could be multiplied all over the country.

The council of my biochemistry society, in a meeting last month, just sat kicking this around. We, without any trouble, added up at least 50 such requests among our small group of 8 people that we could not handle.

Senator PASTORE. How much has the House allowed for that? Is it this $2,962,000 for training?

Dr. HANDLER. Yes, sir. A half million of that is in a special program which you provided last year and which is committed for a period of 5 years. It is an experimental training program. It does not deal with these people. It deals with attempts to interest some medical schools in providing research training for selected undergraduate medical students.

It does not deal with the same group.

$2.4 million of the $2.9 million is the kind of thing we are talking about.

We think that training such people is an enormously important service, and if ultimately we don't train them and you don't support them so they can do this fundamental research, there will come a time when it will be rather pointless to appropriate money for direct clinical research and built-in laboratories. We won't have the information to use. This is, I think, the real point we are making.

FIRST SUPPORT PLEA BEFORE COMMITTEE

This is for us a historic occasion. In the 11 years you have been doing this no one has come before you to urge and ask for such support.

Senator PASTORE. Is this the first time you have appeared?

Dr. HANDLER. Yes, sir; this is the first time I have appeared. It is the first time anyone appeared.

Senator PASTORE. How did this item get in the budget in the first place? Do you know anything about the historical background of that?

Dr. HANDLER. I don't really know this. I can find its history for you.

Senator PASTORE. No, no. I can find out, but I was curious.

Senator STENNIS. It was doubtless a recognition of the medical group and the necessity of this basic group.

Dr. HANDLER. Dr. Aldrich, who is going to speak after me, is professor of pediatrics. I don't know what he is going to say, but I can guess. I am sure he will take exactly the same tack.

NO OTHER AVAILABLE SOURCE OF FUNDS

Senator SMITH. Doctor, is there no other place in Government you can get this kind of money for the training in basic research?

Dr. HANDLER. For this type of training there is no other place in Government, not through the Science Foundation or any other agency, to the best of my knowledge.

Senator SMITH. This is the only place it is available?

Dr. HANDLER. Yes, and here in limited amount.

For research projects there is some such money coming through the National Science Foundation, but the National Science Foundation in general has taken the tack that "We will not support the physical area and the biological area that the National Institutes of Health will take on." In competition with clinical research projects and problems, these fundamental problems in general have not been adequately supported.

Senator PASTORE. Are there any further questions of the doctor?

Senator STENNIS. I want to ask one general question, if I may.

This certainly does point up the need for an overall look being continued from year to year.

TRAINING PRIOR TO NIH

Doctor, before we had the National Institutes of Health what was the general pattern of the medical research? I know some of it was carried on, but, without going into details, just what was the general pattern?

Dr. HANDLER. These fundamental scientists were not trained in quantity. To arrive where they were going they had to have very real drive and decide this was the thing they wanted to do more than anything else they could think of. I can recall eating rat livers on one occasion when I was hungry, literally. I think that is the extreme for us.

The number of people trained was limited, but even up to the present time our total supply of fundamental information had not adequately been used by clinical medicine. At this time, however, I think they have gone about as far as they can go with the information available, and now we have to catch up somehow.

Senator STENNIS. You used up the supply.

Dr. HANDLER. I think that is correct.

May I state one other thing I forgot?

Senator PASTORE. Certainly.

Dr. HANDLER. The general research training committee which considers these training grants for the National Institutes of Health met in Bethesda earlier this week, and I would like to read a portion of my statement here, if I may. This committee of which I am a member met earlier this week and drafted a resolution directed to Surgeon General Burney through Dr. Shannon, Director of the National Institutes of Health.

COMMITTEE RESOLUTION

I trust that this resolution will soon come to your attention through appropriate channels. The import of this resolution was to the effect that the committee wished unanimously to express its conviction that the research training grant program was one of the most important endeavors of the National Institutes of Health because it would furnish the trained scientific manpower upon which all other programs of the National Institutes of Health were crucially dependent.

In addition, the committee agreed that this new training program by its organization outside of the categorical institutes possessed the necessary freedom and flexibility not otherwise obtainable.

Further, the committee was impressed by the increasing volume of excellent and well-considered applications that indicated the immediate need of increased support in fiscal 1959, and support thereafter by an annual budget in excess of $15 million to $20 million in order that this crucial national program be given adequate support and continuity.

Lastly, the committee unanimously agreed that this program should be given forthwith top financial priority.

This is a committee of 21 distinguished advisers in all areas of biological sciences.

ESTIMATE OF FEDERATION BOARD

The Federation Board, which I here represent, considered that a figure of $10 million would not be inappropriate. But $15 million to $20 million is perhaps a goal to be considered for later years. At the moment, however, there are $2.5 million in commitments, $2.5 million of unpaid but approved applications for a program which has never been publicly announced.

No medical school, no department of zoology, no professor has ever received a letter or bulletin of solicitation concerning these funds which are available. These have come in completely unsolicited fashion because the need was so great.

Senator PASTORE. Dr. Aldrich.

Dr. ALDRICH. I have, Mr. Chairman, a statement also prepared which I would like to put in the record, if I may. And then I would like to elaborate on several points which I think will strongly support exactly what Professor Handler has expressed.

(The statement referred to follows:)

STATEMENT BY ROBERT M. ALDRICH, M. D., UNIVERSITY OF WASHINGTON, IN SUPPORT OF THE GENERAL RESEARCH TRAINING GRANTS AND GENERAL RESEARCH GRANTS PROGRAMS OF THE DIVISION OF RESEARCH GRANTS, NATIONAL INSTITUTES OF HEALTH

Mr. Chairman and honored members of this committee, I am indeed privileged to offer testimony before this distinguished committee concerning the needs of these two crucial and fundamental programs in the basic medical and health-related sciences.

The general research training grant program at the graduate level was put forth at a fortuitous time, when a sharp reappraisal of research training needs in this country was underway. This new program is noncategorical and thereby lends itself to graduate research training on a broad scale. Heretofore, emphasis has been placed on research training in the field of an organ system, e. g., heart, or some specific disease, e. g., cancer, but this new program recognizes that acute shortages of trained scientific manpower may exist in other broader areas which cannot be classified among those already provided for.

The mechanism by which this program supports research training at the graduate level is admirable in its flexibility and invites proposals for graduate research training that are directed toward the development of independent investigators who will be prepared to make their careers in other biologic areas of major importance for the future. Above all, this program is constituted so that it will provide for the support of individuals in a wide variety of sciences that can contribute to better understanding of human biology. Universities and other nonprofit institutions can now prepare excellent multidisciplinary research training plans that will draw from virtually every biologic and physical discipline in order to broaden the knowledge and research preparation of the trainee.

This new program is, in my opinion, the best answer to certain critical research training needs that are presently apparent in the field of child health. I would like to mention briefly only three of several examples which come to mind:

(1) The general research training grant program complements very nicely the cerebral palsy study which is presently in progress. Since the onset of the cerebral palsy study, it has become clear that a good many of the available academic pediatricians have become engaged in this work. There are only a limited number of these men and women who are trained independent investigators. As new and promising leads are discovered due to this study, there will be a rise in the demand for trained medical scientists who can follow out these opportunities. The general research training grant program can, therefore, contribute to the ultimate success of the present cerebral palsy study by beginning to prepare independent investigators now.

(2) Although radioactive fallout has been a topic of intense debate in recent times, there seems to be agreement on two points. First, that it will remain with us for a long time; second, that we know very little indeed about the effects of low level accumulations of radioactive materials in human tissues. There is

now beginning to appear evidence that growing human subjects, particularly those in infancy and early childhood, handle certain radioactive materials in a manner that is quite different from adults. This is especially notable in the case of strontium 90. In my opinion, it is urgent that some independent investigators be trained who will concern themselves with the differences between the adult and the child insofar as radiation effects are concerned. The type of training that would have to be provided is certainly noncategorical because it would include a knowledge of human growth and development, substantial preparation in chemistry and physiology, and expert knowledge in the field of radiobiology. The general research training grant program would lend itself well to training of investigators in this very important field.

(3) Disordered human embryology and development probably is the largest and most important single field in human biology that remains to be thoroughly investigated. These disorders may be the result of either genetic or environmental factors and can become apparent at any time from conception to death. Prevention of large numbers of defective persons can only follow the acquisition of additional scientific information about the nature of growth and development and the factors which control it. One has only to glance at the magnitude of the effort which goes into the treatment of defects of the central nervous system, the heart, or the skeleton, to appreciate that steps must be taken to curb the incidence of these disorders as soon as possible. Graduate research training in this complicated area of human biology will tax the ingenuity of any university and should draw freely from the broadest possible variety of sciences that can contribute to human biology. Research training of this type is clearly noncategorical and deserves substantial financial enrichment if progress is to be made.

I would like to urge that the allocation of funds to this general research training grant program be substantially increased for 1959 in order that all approved new programs be started as soon as possible. According to the information that I have been able to gather recently from Public Health Service Study Section members, my scientific colleagues, and from my activities as chairman of the committee on radiation hazards and the epidemiology of malformations of the American Academy of Pediatrics, the general research training grant program should be provided with at least $10 million in fiscal year 1959 in order to support all the scientifically approved and meritorious applications that have already been received, and in addition providing a necessary sum for program development and expansion which is so vitally needed in the early stages of this new important national program. Speaking as a pediatric department head who has a responsibility for designing both a research training program and a clinical training program to meet the needs of child health in the future, I would like to stress the importance of this research training program because of its breadth, flexibility, and recognition of the need for far greater interdisciplinary efforts in the training of independent medical investigators. It would seem to me that the biology of human growth and development will receive its greatest stimulation in the next several decades if this training program can be expanded to meet the current demand for support in this field.

The general research grants program should be considered an integral part of this expansion. There are two principal reasons for this: first, research training programs will depend in part for the training experience on the existence of on-going investigations in a wide variety of basic medical fields and in certain categorical areas where the institute programs cannot more appropriately provide support. Second, a suitable research environment in which to launch promising young investigators takes some time to develop. The general research grants program now has a backlog, I have been informed, of several million dollars; thus projects of selected merit in the various fields not covered by the categorical institutes will be delayed at least 1 year unless substantial funds are immediately made available. By applying the same reasoning in calculating the needed additional appropriations for the general research grants program, I am convinced that at least $20 million will be required in fiscal year 1959.

In conclusion, Mr. Chairman, the sums requested above are urgently needed for these two valuable and necessary programs and without this requested aid each may falter in the coming fiscal year and thus research and training in these fundamental areas will largely come to a halt.

TRAINING IN PEDIATRICS

Dr. ALDRICH. I am professor of pediatrics at the University of Washington School of Medicine in Seattle, and I have been there approximately 2 years.

My responsibility lies in 2 areas: 1 is to train young men and women to take care of sick children, and train them as well as I can clinically. This is a disease-oriented program.

My second responsibility is to train individuals who will do medical research in the major problems of child health that exist today and that seem to be ahead of use.

In planning this dual program I have become convinced that there is a serious shortage of scientific manpower in the fundamental sciences that Dr. Handler has spoken to, and that this serious shortage is going to hamper medical research of the type that I will use as examples and of the type that I am interested in, and it will do so in a very short time.

If you are to train a person in a clinical department who is going to do fundamental medical research, he usually must complete his clinical work and then go ahead for a period of certainly not less than 2 or 3 years of good, sound, basic scientific training. The nature of the problems that face child health today and certainly face many other fields of clinical medicine—I don't wish to restrict this to child health—is so complicated that they can't categorize it under the heading of a disease like cancer or some organ system like heart or the central nervous system. These persons who are going to do this fundamental medical research need a much broader period of training.

If we go about training these people, we must rely for their training on these same basic scientists, and Dr. Handler represents one of these fields—biochemistry.

NECESSITY TO DRAW FROM BASIC SCIENCE

We must draw also from other basic science departments in medical schools which would be the anatomists, the pharmacologists, the physiologists and so on, and then we must turn to the rest of the university, the medical school being only one branch.

Here we need the men who are physicists, mathematicians, students of the behavioral sciences, the psychologists and so forth, the zoologist, and the botanist who has done virus work in plants, so that research training for people who are going to try to crack open complex medical problems in the field of child health is not something that can be restricted just to a medical school. It is a university problem and it is going to require a wide variety of participants in this research training.

Senator STENNIS. Mr. Chairman, may I interrupt?

Senator HILL (presiding). Yes, certainly.

Senator STENNIS. This is an important point, and I feel, like the chairman here, I may bear part of the load of this matter if we get into a discussion of it.

Would you state just in 1 sentence or 2 the basic proposition that these 3 gentlemen in the medical profession are appealing for? More emphasis on basic research?

Dr. HANDLER. You just stated our point.

Senator STENNIS. It is a very, very interesting field, and I just thought that you ought to be brought in.

Senator HILL. Thank you.

I apologize to the committee and to these witnesses for being late, but I had to go before the subcommittee on public works. We have three very important Alabama river and water projects, and we had a large number of Alabamians up here to testify, and I happen to be a member of that subcommittee.

Dr. ALDRICH. I was just coming to the point Senator Stennis mentioned.

Real excellence of research training of people who are going to staff these clinical departments then rests upon the excellence and the number of excellent men in these basic departments, whether they are in the medical school or in the rest of the university. This is a universitywide problem.

I have a very strong conviction also that those of us who represent the clinical field of medicine have perhaps not been as vocal as we might have been in the past in pointing to this need for helping our other member colleges in the university. We really owe them a great debt, and we could not proceed to solve our clinical problems without their help. They do the research in large part, and they help us to train our own men who work with us.

I want to extrapolate a few years ahead, if I may, just to make a point.

FUTURE PATTERN OF TRAINING

I have also felt that in about 10 years, possibly a little longer, we are going to see a change in the pattern of the academic staffs of our university medical schools. The basic science departments will remain basic science departments, but I think we are going to find that the younger men coming along, staffing clinical departments in medicine, surgery, dermatology, whatever clinical field you wish, are going to be clinicians and are going to have had 3 or more years of good basic science training from these various basic departments of the whole university, and this is going to result in, in effect, two pools of scientific manpower for research training.

I would think that we will find, for example, a bright young man in a clinical department with good biochemical experience and training collaborating in a research project with someone in biochemistry department.

This is really a very efficient way to function. So that these two scientific pools are working together for both the purpose of doing basic research and also the research training of others. I think this pattern is going to emerge, but it is terribly important that we now build our basic-science departments as strongly as we can so that we can train this second pool of scientific manpower which must come. It simply is inevitable, in my opinion.

I would like to turn now to one other point. In looking as objectively as I possibly have been able to at some of the really acute needs in the field of child health, that is research and training needs, there are two that I would like to underline.

RADIATION PROBLEMS

I used three examples in the prepared statement. One of them is the problem of radiation. I cannot speak formally before you for the American Academy of Pediatrics. I want to make that clear. But I have been chairman of their committee on radiation hazards and the epidemiology of malformations, and, in the process of gathering data for this group, I have become very much concerned about the fact that, in universities where there are departments of pediatrics, there are almost no individuals who are well trained in radiation biology and, most importantly, who also understand human growth and development.

I want to point out why this is such a significant fact, and I think this is something that has not been properly displayed in the news magazines and so forth. There is a very definite difference between an infant and a small child and an adult in the way they handle certain radioisotopes. Radioactive strontium, strontium 90, which is one of those unfortunate elements that result from fallout, is taken up by the body of the infant and small child much more avidly than by an adult, and there has been recent evidence of this published in scientific journals. Not only this, but the materials are concentrated in very narrow areas of the bone, so that the effect of the radiation is sort of "zeroed in" and focused in one place.

Similarly, there is another difference. The infant bones, the long bones of the legs, for example, contain red bone marrow, whereas in the adult this is gone, so that there are blood-cell-forming cells in the bones of these infants. The point I am trying to make is that there is a very significant difference in the way these radioactive materials may affect the infant as compared to an adult. And so, if radiation is a problem in our population, which I happen to think it may become, we should be training people who know radiobiology and who also know human growth and development.

COOPERATION OF ATOMIC ENERGY COMMISSION

Senator THYE. Mr. Chairman, might I ask a question at that point?

Senator HILL. Yes, Senator Thye.

Senator THYE. Is the Atomic Energy Commission directing any of its funds into that field of research? You are speaking entirely of radioactivity and the fallout. There, you are in the field of the Atomic Energy Commission. They, of course, have the funds for such research.

Dr. ALDRICH. I would like to say, Senator Thye, that the Atomic Energy Commission has been extremely cooperative in the facts we have tried to gather. They have overcome us with their kidness.

May I answer your question specifically?

I do not believe thet they are engaged in the research training type of activity that I am speaking toward. They will allocate funds on a contract basis to universities and other nonprofit research organizations for research in radiobiology, but the training of the men who are in the medical schools and who are faced with the medical problems is something that we have to turn to NIH to get support for.

Senator THYE. Then that leads me to this further question:

In the event that the Atomic Energy Commission has been cooperating with you, if they have made funds available to you in your basic-research activities, will that, in any sense, give you the leeway to take of your own funds and to broaden your educational activities to qualify the younger generation to work in this field?

Dr. ALDRICH. I think it will help only in part, sir. May I explain the reason I say in part? I believe that good research projects that are going on are essential to a good research training program, because the man who is being trained to do research must participate in a good research program, and the AEC can certainly support the research projects. But we do not have funds for the stipend of the man who is being trained. We have to go to the general research training program of the NIH for this. And, second, we also have to consider the physicist, the biochemist, the embryologist, the geneticist who is also doing the training, and his salary is another matter which we have to concern ourselves with, which Dr. Handler has elaborated in a little more detail. Those are the areas, sir. Does that answer your question, Senator?

Senator THYE. Partly. But I still do not have the complete answer as to whether you were getting a great deal of help from the Atomic Energy source of funds in research activities. I realize that you are not getting it back into the educational field to qualify new students in scientific development, but, in your own research activities, you have been showered with the kindness of funds from the Atomic Energy Commission.

Dr. ALDRICH. I didn't say "showered with kindness." I said they had been cooperating very strongly with our committee of the academy in giving us all the information that we wanted about their activities in the research area. This has nothing to do with the obtaining of funds, sir.

Senator THYE. Then I misunderstood you. I thought you were being showered with kindness, and I could only visualize the funds as the kindness in that field.

Dr. ALDRICH. This is written kindness. I wanted to emphasize the matter of radiation and its importance to child health, because it is a timely subject and because it needs to be done now. We cannot wait. It is apparent, from what I can find from the allocation of funds for 1958 as compared to 1959 in the general research and services budget, that there is not going to be any money for new starts, and, if radiobiology is an important subject that needs a new start, there ought to be an increase in the 1959 appropriation to take care of this.

INCREASE NEEDED

Senator HILL. How much do you think that increase ought to be?

Dr. ALDRICH. Strangely enough, Dr. Handler's figures and my figures are very close. I suppose we probably got hold of the same sources. But I also understand that they have in the Division of Research Grants a backlog of unpaid, meritorious, approved general research training grants, and that there are many of them coming in, very good ones. I know that there are several going in shortly from our university, and doing some addition, then, it looks to me as if in the research training grant area they are going to require somewhere

in the vicinity of $9 million or $10 million in the 1959 appropriation if they are going to plan to meet not only their backlog but a reasonable number of meritorious new research training grant starts. This is about the way it looks to me. I cannot see how they could possibly get by with less than around $9 million.

These figures are the only ones that I have been able to get hold of.

HUMAN GROWTH AND DEVELOPMENT

There is one other area that I will just briefly mention, and which is so noncategorical that I think I should say something about it. This is the very broad subject of human growth and development.

I think if one considers the magnitude of what we are putting out in the treatment of diseses of the heart, diseases of the central nervous system, the skeleton, and so forth, and fails to pay attention to how we might prevent these distressing situations we are not taking the long-range view.

My point is this: I think we should be doing a great deal more to train independent investigators in disorders of human growth and development, which can take place anywhere from conception to birth.

Again, the departments of universities, while not necessarily in the medical school, have a very substantial interest in this subject. The fact that they have not submitted more applications for this particular category of research training grants is very interesting to me, and I think simply reflects the fact that they have not really known about this program. But when they do get this information and team up, as I have illustrated, with the medical school departments to develop good, strong research training programs, I think we are going to see some real progress made in understanding human growth and development.

SUMMARY ON NONCATEGORICAL RESEARCH GRANTS

So I simply summarize by saying that it is high time that these noncategorical research training grants were increased in amount so that we can make the new starts we need in some of these extremely important areas, and that there also ought to be an increase in the allocation for general research grants because as I tried to indicate to Senator Thye, good, strong research projects in these areas is essential for good strong research projects in these areas is essential for good research training.

Thank you very much.

Senator HILL. Doctor, I might say that I heard the strongest commendation from my good friend and colleague, Senator Jackson, about you. He could not have spoken any higher or in finer terms of you than he did.

I believe the members of the committee this morning will agree with me that you have certainly confirmed all the fine things that he said about you.

Dr. HANDLER. May I add one sentence?

Senator HILL. Yes, certainly.

Dr. HANDLER. Something in what Dr. Aldrich said pointed up beautifully the very problem that is posed here. When Dr. Aldrich becomes concerned with the effects of radiation in normal development, and the "bottleneck" in this process, and whereas there are

funds available today through the Atomic Energy Commission or even through the National Institutes of Health to study the effects of radiation on development, he at the same time said, "I am not immediately interested in radiation, but I would like to study development." This is where you find that there is difficulty. There aren't adequate funds to simply study the normal process of human growth and development and until you have this information there is no point in trying to study the effects of radiation. One doesn't know what he is doing. That, I think, is really the point we wanted to make before the committee.

BASIC RESEARCH

Senator HILL. The research that you speak about does not dramatize itself. It is not like some of the other research. However, we speak of basic research, and that is absolutely what it is, is it not, just as you do not see the foundation of this Capitol. You see the dome and the pillars and all that, but you do not see the foundation.

What you are speaking about now is that foundation. Is that not right?

Dr. ALDRICH. Yes, sir.

Senator STENNIS. Mr. Chairman, I wish you would have been here and heard Dr. Handler make that remark because those were almost his own words.

Senator HILL. Great minds sometimes run in the same channel.

I am impressed with the apparent views of these doctors here this morning, and I am reminded of the saying of old men for counsel and young men for vision. These men are seeking to lift our vision so we may see these horizons out there tomorrow and we may prepare to be ready and be strong for tomorrow. Is that not right, gentlemen?

Dr. ALDRICH. Absolutely.

Senator STENNIS. Mr. Chairman, I had the same observation this morning as well as in the missile hearings where we had the young scientists and young manufacturers. I remarked that they did not have as much to unlearn as we did.

Senator HILL. Thank you, doctor, very much.

HARVARD UNIVERSITY

STATEMENT OF CARROLL M. WILLIAMS, PH. D., M. D.

GENERAL RESEARCH GRANTS AND TRAINING GRANTS PROGRAM OF NIH

Senator HILL. Dr. Williams, you have not testified, have you?

Dr. WILLIAMS. I have not, sir.

Senator HILL. We will be happy to have you proceed now, sir.

Your entire statement will appear in the record if you want to highlight it.

(The statement referred to follows:)

Mr. Chairman, distinguished members of the committee, and gentlemen: My name is Carroll Williams. I am a Virginian by birth and preference. I lived in Richmond during the first 20 years of life. I attended public schools in Richmond and, later, was graduated from the University of Richmond with a bachelor's degree in biology. I then won a scholarship for further scientific studies at Harvard. The Harvard faculty, incidentally, proved to be full of southerners—and still is. At Harvard I received the master's degree and then a doctor of philosophy degree in zoology. Then, at the Harvard Medical School, I studied

medicine and was graduated with the doctor of medicine degree summa cum laude some years later. In 1946 I was appointed to the Harvard faculty where for 12 years I have taught physiology to Harvard undergraduates, premedical students, and graduate students.

This chronology may suggest that it has always been possible in our society for an essentially impecunious chap to get ahead provided that he has ability, is willing to work hard, and is favored by a fair share of good fortune. However, this is a rather long and rough road, and among the several thousand students that were my associates in the John Marshall High School in Richmond, I think I am the only one who has ended up as a basic scientist.

We are creditably informed that times have changed. It now is obvious that the happy-go-lucky system that worked pretty well in the past will no longer suffice. We simply have to have more and better scientists in our laboratories, research institutions, and universities.

I come here as a private citizen and protagonist of certain recent developments which in my opinion, can make a substantial contribution to this goal of obtaining more and better scientists. I refer to the new training program in the basic medical and biological sciences, which the National Institutes of Health has recently set in motion. I care to speak with enthusiasm about the prudence and timeliness of this new plan. The National Institutes of Health, as you know, are organized as a series of Institutes, each being responsible for research in a certain pathology: Cancer, heart disease, infectious disease, allergy, and so on. Where does pure science fit into this picture? The basic studies which have always sustained every new advance can scarcely be accommodated within the confines of a particular pathology.

My students and I are engaged in the study of a thing seemingly remote from disease; namely the study of insect development and metamorphosis. What we are doing is to use this strategic insect material to study the basic mechanisms of normal development. We simply must know what the normal controlling mechanisms are before we can understand their derangement in the case of disease; a loss of control and a return to the primordial antagonism of cell for cell.

What, then, are the normal controlling mechanisms? This is where basic biological research comes into the picture. A comprehensive answer to this question would galvanize a whole series of practical happenings and might even permit one to develop a rational approach to cancer thereapy.

It seems to be a law of nature that pure research cannot be organized, systematized, and directed the way that applied research can be. A worker in pure research must have a certain amount of solitude: a chance to concentrate on inaction rather than on prescribed action. Above all, he must have uncommitted time to spend in the library, in discussions with students, and in the parturition of theories and ideas.

I can illustrate this in a concrete manner, namely, in relation to our recent experience with an insect hormone. This hormone is called the juvenile hormone. It is a fantastic reagent which insects use in regulating their metamorphosis. In the insect it blocks growing up without interfering with growth itself. It also blocks aging. It is the agency which Nature has used for millions of years to regulate the tempo of insect growth and metamorphosis. The isolation of this material is likely to open a new chapter in our understanding of aging, senescence, and the whole enterprise of growing up. In recent months my associates have succeeded in extracting the same material from foetal rats and from mammalian adrenal glands.

The point I want to make is that this result was the outcome of experiments designed for totally different purposes, none of which had even a remote relationship to pathology or practical affairs. One sets out to study one problem and solves another. This is always the way it is in basic research. There is no prescription or formula; you just set out on a journey and end up somewhere.

This brings me back to my original proposition. Basic biological research cannot be organized in terms of predictable results. Here in the United States we are past masters at the art of applied research and technology. But like a satellite in the nose of a rocket, applied research and therapeutics cannot get off the ground without a broad program of basic research aimed at nothing in particular except the acquisition of knowledge for its own sake.

For these several reasons I salute the prudence of the National Institutes of Health in their wish to put some blue chips into this area of basic biological research. And, in my opinion, the best place to put them is in support of programs of training in biological research at the undergraduate, graduate, and postgraduate levels, and in the support of research itself which may have no direct

relationship to pathology or disease. The universities are mindful of these needs and are willing and able to implement them.

In recent weeks I have thought a great deal about how much financial aid is now needed, both for research support and for the support of research training in the area of the fundamental biological and medical sciences. It is my understanding that these programs already have at hand numerous projects whose excellence has been affirmed by distinguished panels of scientists. I am certain that the new general research training grants program ought to have and can well use immediately an appropriation several times the level provided in the fiscal year 1959 budget. In relation to the general program of research grant support, it is my understanding that it is one of the smaller programs at the National Institutes of Health and is at the approximate level of $9,500,000. In my considered opinion, twice this level of annual expenditure for these purposes is well merited and is urgently needed now.

General Statement

Dr. Williams. Mr. Chairman and distinguished members of the committee, my name is Carroll Williams. I am a Virginian who has been living in Boston for some 20 years.

I was first trained in science at Harvard, and then went on for training in medicine likewise at Harvard. But I am one of those strange medically trained chaps who decides to return to his first love, that is this basic science that we have been talking about.

I am a zoologist, a professor of zoology, and now this department of which I am a partner at Harvard turns out to be the largest and most extensive department in Harvard University. By latest count, we have in this department of biology no less than 22 full professors. This doesn't take into account the associate professors, assistant professors, instructors, postdoctoral fellows, about 90 graduate students and numerous undergraduates. The largest and most extensive department at Harvard is this faculty in biology, utterly devoted to this enterprise in basic science. This contrasts, I think, with what we see going on outside of the so-called university departments were we see basic science given only modest and indifferent support and where we find that the practical applied science built around diseases, around pathology, are the things that got most of the support.

I am in complete agreement with what my colleagues have said here this morning. I want to economize on time. I know that you are running a little late.

To this end, I would like your permission, sir, to enter into the record a prepared statement.

Senator Hill. We will have that in the record in full, Doctor.

Dr. Williams. Thank you, sir.

TOOLING UP FOR BASIC SCIENCE RESEARCH

Now, what the National Institutes of Health want to do, as I understand it, is to tool up also in this general area of basic science. Some of the support has come along on a small scale from the individual institutes built, as they are, around individual diseases and pathologies. But the essence of our argument this morning is that the National Institutes of Health should be encouraged and supported in tooling up to meet this challenge of our time, this challenge of support of basic research on which everything else will rest.

To recapitulate, what we want to do is to get some money to plow into this field to support general, basic biological research on the one

hand and a program to support the training of research workers in the basic sciences on the other hand. These are the two propositions.

Time is drawing on so rapidly.

Senator HILL. You go right ahead now.

Dr. WILLIAMS. I think the best thing I can do is to supplement my prepared statement by, shall we say, a kind of a test case, a case that shows that basic research can do so much.

Senator HILL. Do not be pressed too much by time. You give us what you have on your mind.

EXAMPLE OF VALUE OF BASIC RESEARCH

Dr. WILLIAMS. What I have on my mind is a chance to supplement what my colleagues have said by perhaps illustrating how a piece of basic research can start off aimed at nothing at all practical, where you are just having a kind of an adventure of ideas and how suddenly, and without any predictability something that couples on pretty intimately to practical affairs happens.

I brought along in my pocket here this vial which you may care to pass around and inspect. That beautiful golden oil is the so-called juvenile hormone.

Senator THYE. Why do you refer to it as juvenile? Is it taken from a juvenile, developed from that, or is it in its classification a juvenile?

Dr. WILLIAMS. Sir, your question is very well asked. This material is obtained as an extract from certain insects. We were engaged in a program of pure research in the control of insect growth and metamorphosis.

Even though much of my training is in medicine, I felt that this was kind of a strategic material to get at some of these fundamental questions. As an incidental byproduct of this kind of study, I was able, a couple of years ago, to isolate this juvenile hormone from these insects, a material which for 20 years has been kind of a will-o'-the-wisp in biology.

The reason I bring this along and invite your attention to it is that it illustrates rather well how one cannot plan an end game in pure research. You just have to back and sustain pure nonprogrammatic research and then this may turn out to be the goose that lays the golden egg, you see.

Senator THYE. Then, Doctor and Mr. Chairman, to pursue this one step further, what has that gained you, that cylinder tube with all of this liquid in it?

INSECT HORMONE

I am now thinking about the record. They cannot see this tube. That is why I describe it. It has all of this liquid in it. I do not know how many millions of insects that requires to process in order for you to have that amount of liquid, because there is considerable liquid there.

Dr. WILLIAMS. This is a hormone that insects have used for millions of years to regulate their own growth and metamorphosis.

When this material is around in the insect, the insect grows, but it does not grow up or mature.

Senator THYE. What kind of an insect, Doctor?

Dr. WILLIAMS. All insects, all metamorphosing insects.

Senator THYE. A June bug or potato bug?

Dr. WILLIAMS. It would be in the early juvenile stages of these two insects.

Senator THYE. In other words, while they were in their hatching stage?

Dr. WILLIAMS. It would be in their growing stage prior to metamorphosis.

Senator THYE. It could be a June bug, it could be a grasshopper?

Dr. WILLIAMS. It certainly could, sir.

Senator THYE. And it could be any of those?

Dr. WILLIAMS. The only way the animal is able to stabilize itself in the early juvenile-growing phase is by making and using this material.

Senator THYE. They make it from their own bodies?

Dr. WILLIAMS. They synthesize it. Then when the glands stop producing this material, you get the sudden change and revolution in the life history.

Senator THYE. That is the reason you called it juvenile?

Dr. WILLIAMS. Yes, indeed.

Senator THYE. It was not in the sense that it was a juvenile, but it was in the early stages of that insect's development?

Dr. WILLIAMS. That is true. This material is a sort of status quo hormone. It stabilizes the animal at whatever stage it is in.

BENEFIT OF HORMONE TO MEDICAL SCIENCE

Senator THYE. Doctor, from the standpoint of what you have achieved, of what benefit is it in the medical research?

Dr. WILLIAMS. That is an excellent question, sir.

We have, in the last month or two, been able to obtain extracts from fetal rats and also from mammalian adrenal glands which show the same activity. It seems possible that a hormone akin to this insect material is involved in the growth and ageing and analagous phenomena of higher animals.

Senator THYE. Doctor, one more question on that same phase. Where do you intend to apply this?

Dr. WILLIAMS. This material, we think, will give us some leverage on this whole question of the biochemistry of growing up. Moreover, the insect in the presence of this material grows, but fails to grow up and fails, in our experience, to age. So that if you stabilize the animal using this kind of material in the juvenile state, then you oppose a lot of these happenings that have heretofore been viewed as inevitable and relentless.

Senator THYE. You mean the inevitable old age creeping up?

Dr. WILLIAMS. I feel that there is a biology of old age, too, and I think that a genesis such as this can give us insight into it.

This material imposes a kind of a biochemical restraint on growing up and on aging. Even if it is only active in the lower animals, it nevertheless gives us a root of approach to the chemical engineering of growing up and of aging. This is what basic science is all about. You can use a strategic kind of preparation to probe deeply into the secrets of nature, and what you learn is then extremely pertinent at all levels.

OTHER PRACTICAL USES

There is just one further facet to this thing, and then I am finished. That is using this as a further text of how basic research can suddenly blossom into something of practical worth. It turns out that this material, when placed on the surface of an insect, gets inside the insect and fouls up its metamorphosis. This discovery has opened a new chapter in the control of insects by the use of their own hormones as insecticides.

Senator THYE. Then, Doctor, I have a further question. Supposing that that got on your skin, how do you handle it when you work in the lab?

Dr. WILLIAMS. Well, it certainly gets on my skin often enough, but my skin is rather different from the insect's skin, I presume.

Senator THYE. It has no effect on you?

Dr. WILLIAMS. It has not so far.

Senator THYE. May I inquire further how long you have worked with it?

Dr. WILLIAMS. About 2 years.

Senator THYE. Are you cautious in handling it so as to make certain that it does not get into an open scratch or wound on your hand?

Dr. WILLIAMS. I usually take reasonable precautions.

Senator THYE. You do?

Dr. WILLIAMS. Yes.

Senator THYE. You would not prescribe internal dosage of it?

Dr. WILLIAMS. Not as of now. We have purified this material extensively and have been able to reduce the activity to a tiny fraction of that volume, and hope that in the next month or two to crystalize the material and get its chemical formula.

PRESENT MEDICAL VALUE

Senator THYE. The entire research that you have had as a project there would lend itself to medicine only as a history of it and the identification and its development, and if medicine in the course of its endeavors were to reach back, you have the history and the facts and the knowledge for them to turn to. That is where the value of your research project is to medicine?

Dr. WILLIAMS. We cannot say what this will do to a human being because we feel it prudent to get a chemically pure material before proceeding with these clinical tests. There is a good chance, I think, that this material itself will intervene in chemical processes in higher animals.

That is the chance one takes. Even if it does not work that way, it is a fortunate arrangement in itself to have this kind of biological leverage even on the lower animals.

This, Mr. Chairman, is just an illustration, I suggest, of what we are talking about, how basic research in this broad biological area cannot be organized in the same sense that applied research can be organized; nor can you predict precisely what is going to happen. All you can do is to support it and see that it is in good health and sustained, and you can just bet with complete confidence that basic research will generally, time and time again, give results which couple rather immediately to practical affairs and to the treatment of disease.

It is for that reason that we come before you pleading that your committee will sustain the type of development that the National Institutes of Health want to proceed with, namely, building up this program of basic research work and this allied program of training research workers in the basic medical and biological sciences.

Senator HILL. Any further questions, Senator Thye?

Senator THYE. No.

Senator HILL. Any questions, Senator Stennis?

Senator STENNIS. I believe not.

Did you gentlemen appear before the House committee?

CITIZEN'S BUDGET FOR 1959

Dr. HANDLER. Nobody appeared before the House committee, so the figures I have seen for the citizen's budget for 1959 were simply last year's budget.

Senator HILL. The House made no increase at all?

Dr. HANDLER. No one asked them to.

Senator STENNIS. I have been very impressed with this testimony, Mr. Chairman. I think it is very timely. As I understand it, there is no conflict between your thinking and that of the officials of the National Institute?

Dr. HANDLER. None whatsoever.

Senator STENNIS. You have already organized your program; it is just a matter of additional funds for this fundamental research that is so basic in medicine.

Dr. HANDLER. That is correct, sir.

Senator HILL. And, of course, as we know, the witnesses from the National Institutes are inhibited in asking for additional funds; therefore, they cannot come here and do what these gentlemen have done in such splendid manner in presenting their case.

Senator STENNIS. With all deference to the Bureau of the Budget, I do not believe there can be a better illustration than this.

Senator HILL. I want to thank you and express our deep appreciation for coming here and bringing us these most informative, interesting, and I think I will say challenging, statements.

Dr. HANDLER. Thank you for the opportunity, sir.

Senator HILL. We are certainly deeply grateful to you.

LETTER FROM DR. HENRY C. MEADOW

Senator HILL. Dr. Henry C. Meadow, assistant dean of Harvard Medical School, has written to me urging the committee to provide additional funds for the general research program of the NIH. Dr. Meadow's letter will become a part of the record at this point.

(The letter referred to follows:)

HARVARD MEDICAL SCHOOL,
Boston, Mass., May 7, 1958.

Hon. LISTER HILL,
Committee on Appropriations,
United States Senate, Washington, D. C.

DEAR SENATOR HILL: As assistant dean of the Harvard Medical School I write to invite to your attention an already important, although only recently inaugurated, program of the Public Health Service. I refer to the general research training grant program, which was started only a year ago. This program is aimed at the important goal of assisting the medical science departments of the Nation's medical schools to provide more and better research training in the

disciplines basic to modern medicine. The facts relating to this program, as I understand them are these:

The general research training grant program is presently budgeted at $2,962,000. The same amount has again been recommended for next year. (See the category "Grant research and services" in the NIH budget.) At present there exists a backlog of applications already approved scientifically or for which commitments have been made that exceeds $5.8 million. On the basis of a year's experience, applications will continue to be received at the rate of $1 million each month; they will be approved at about half that rate.

Owing to the bottleneck that exists in terms of the Nation's scientific manpower in the biological, chemical, and physical sciences fundamental to medicine, I urge you and your colleagues on the Committee on Appropriations to study this program with a view to providing whatever additional funds you believe are necessary to meet the needs of the medical schools. If properly administered and developed, the general research training grant program can become an added source of great strength to the Nation's health.

Sincerely yours,

HENRY C. MEADOW, *Assistant Dean.*

RECESS

Senator HILL. We are going to stand in recess until 2 o'clock.

I want to tell the members of the committee that we are going to have distinguished witnesses this afternoon; Dr. Sidney Farber, of Boston, one of the most dedicated men I have ever known; Dr. Isidor S. Ravdin; Dr. Wendell M. Stanley; and Dr. E. Cowles Andrus, of Johns Hopkins.

They are all outstanding men. I hope the members of the committee will be here at 2 o'clock.

(Thereupon, at 11:30 a. m., the committee recessed to reconvene at 2 p. m., same day.)

AFTERNOON SESSION, 2 P. M., FRIDAY, MAY 16, 1958

INTEREST OF SENATOR NEUBERGER

Senator HILL. The committee will kindly come to order.

Senator Neuberger, we are happy to have you here. Would you like to say a word?

Senator NEUBERGER. I just came to be present when these distinguished doctors testified, Mr. Chairman. Of course, you know I support with good wishes what they support with knowledge and information. I am very happy to be here.

Senator HILL. We know your deep interest in this matter of medical research. We know your fine efforts in behalf of it. We certainly welcome you here. We are happy to have you here.

Senator NEUBERGER. I am happy to be here.

Senator HILL. You can sit up at the table if you wish.

Senator NEUBERGER. This will be fine. Thank you very much, sir.

STATEMENT OF THE CHAIRMAN

Senator HILL. Dr. Ravdin, will you come around please, sir?

I will tell you what we might do, Dr. Ravdin. You and Dr. Stanley and Dr. Farber are going to talk on the same subject matter. Suppose you all three come up together, please.

We want to welcome all three of you distinguished gentlemen here today and want to tell you how happy we are to have you. You

have been with us in the past. You have always made fine contributions to the work of this committee, and we are grateful to you.

We are certainly glad to have you here today.

Dr. Ravdin, we will be happy to have you proceed in your own way.

Cancer Research

STATEMENT OF DR. ISIDOR S. RAVDIN, PROFESSOR OF SURGERY, UNIVERSITY OF PENNSYLVANIA HOSPITAL; CHAIRMAN, BOARD OF REGENTS OF THE AMERICAN COLLEGE OF SURGEONS; MEMBER, NATIONAL ADVISORY CANCER COUNCIL

PREVALENCE OF CANCER

Senator HILL. I might say, Dr. Ravdin is professor of surgery at the University of Pennsylvania, chairman of the board of regents of the American College of Surgeons and member of the National Advisory Cancer Council.

The University of Pennsylvania Medical School is the oldest medical school in the country. Is that right, sir?

Dr. RAVDIN. That is right.

Senator HILL. I did not mean to imply that you were there when it was founded.

Dr. RAVDIN. I am delighted, Senator, that you put Dr. Farber straight on this matter.

Senator HILL. All right, Doctor, you just proceed now in your own way, please, sir.

Dr. RAVDIN. Senator Hill and members of this committee, I come to testify before your committee on a matter which is very close to my heart. Cancer will cause approximately 250,000 deaths in this country during the year 1958.

Young and old people have cancer in one form or another. It varies greatly in its biological activity.

As one who sees a good many patients with malignant disease and follows their life history thereafter. I believe that we must actively search for the causes of malignant disease and attempt to find more satisfactory methods for its cure.

NEED FOR BETTER THERAPY

A year ago, I stated to this committee that "while surgery and radiation are still the best methods of therapy for a variety of malignant lesions," they are not "sufficiently good to still the search for better methods of therapy." I wish again to emphasize this statement.

I told the committee last year that as chairman of the clinical panel of the Cancer Chemotherapy National Service Center, I have watched the development of the chemotherapy program with the greatest of interest.

We have now functioning a chemotherapy program investigating the effects of chemical agents in the leukemias and the lymphomas; another program is concerned with the effect of chemical agents on the solid malignant tumors, and an adjuvant chemotherapy program in which chemical agents are being used with the hope that they will

improve the end results following surgery, when surgery alone is used as the primary method of treatment.

The cooperative groups, as well as individual units, are materially improving the knowledge of the life history of many of the serious malignant tumors.

STUDIES IN THE CLINICAL PROGRAM

I am sure that today you and your committee will be interested in a summary of the studies presently underway in the clinical program.

In addition to a large number of chemists and pharmacologists, a very large number of clinical investigators has been brought to bear on the development of investigations toward the resolution of the cancer problem in man.

ANTITUMOR AGENTS

There has been developed an effective organization for the synthesis of antitumor agents, their biological study in the laboratory—in normal and tumor-bearing animals and in other biological systems— their preliminary trial in man and their definitive clinical evaluation in a significant number of patients.

At this time, approximately 158 hospital services involving more than 250 clinical investigators have been engaged in 58 individual clinical studies of which 14 are completed or nearing completion. Fourteen active groups are doing definitive studies on 9 types of tumors and 3 additional groups are now preparing to study prostatic, ovarian, mammary, and rectocolonic cancer.

Since the inception of the clinical program 2 years ago, 41 antitumor agents, including 24 steroids, have been tested in more than 2,000 patients. Some of these agents had already been in clinical use, but we are now preparing for the clinical evaluation of many new agents. These will require extensive preparation for clinical trial and the experience gained by clinical investigators during the past year or two should be invaluable in the further study of agents.

The screening mechanism of the CCNSC is turning up a number of agents hopefully of real promise and a considerable number is being recommended for laboratory studies of toxicity, pharmacology and dose response prior to clinical trial, so that preliminary human studies can be carried out effectively and with dispatch, as has already been done with 5-Fluorouracil, several steroids, and a commercially discreet alkylating compound.

These are examples of a growing mechanism for extensive and rapid exploration of new agents as they appear either through the CCNSC screening mechanism, or from other sources.

TESTING OF ANTITUMOR AGENTS

Preliminary biologic trial is being done by skilled investigators on the numerous advanced cancer patients available in most clinics who do not fit the planned "protocol" antitumor studies.

Such patients include a wide spectrum of cancers so that tumor types not represented in the current program can be tested to some degree in a preliminary way. This is particularly pertinent for cancer patients who were resistant to the previously available therapy.

A plan has been devised within the clinical panel for the equitable and rapid distribution of newer antitumor agents so that the clinical program can move more efficiently within the confines of current support.

Additional financial support must be provided for fiscal year 1959. Additional groups will be required to handle the expected flow of compounds during the next year. Rapid evaluation of particularly beneficial agents is now possible.

OTHER CLINICAL STUDIES OF AGENTS

Some of the clinical studies now in progress are as follows:

(*a*) The duration of the remission in acute leukemia in patients receiving daily doses of both 6 mercaptopurine and Methotrexate as compared to those given 6 mercaptopurine daily and triple doses of Methotrexate every third day is receiving careful study.

(*b*) Thio-Tepa and HN2 are being studied, the latter proved more effective in Hodgkins disease and in bronchogenic cancer.

(*c*) 5-Fluorouracil, which has been associated with occasionally striking effects in advanced cancer, has been studied with regard to optimum dose regimens and toxicity in a large series of patients having a variety of cancers. It is now believed that problems of toxicity make a definitive, controlled antitumor study undesirable.

(*d*) Chlorambucil, administered in chronic lymphocytic leukemia is being compared with Myleran. The studies indicate that all alkylating agents may not have identical biological actions on the host.

(*e*) A commercially discreet alkylating material is being studied for its biological effects and to establish a preliminary dose response relationship before its introduction into a definitive antitumor study.

(*f*) About 24 steroids, mainly androgenic, are being studied in comparison with testosterone propionate in about 875 patients having metastatic breast carcinoma. These studies already indicate that there may well be synthetic steroids with greater antitumor efficacy than testosterone itself.

(*g*) Studies designed to evaluate control of recurrences following curative resection in carcinoma of the lung and stomach by the adjuvant use of nitrogen mustard and Thio TEPA, respectively, are well underway.

That is, the use of these agents immediately after completion of the operation and for 5 days thereafter.

In the lung study, 136 curative resections have been carried out.

(*h*) Similar studies have been or will be initiated for cancer of the colon, rectum, ovary, and breast.

(*i*) Clinical study groups for prostatic cancer and for ovarian cancer have been formed and clinical studies are being initiated.

The presently available funds are inadequate to meet the needs of an expanded clinical program such as is envisaged by an increased program of compound procurement from industry, from the CCNSC activities, and from other sources.

I would urge you, Mr. Chairman and your committee, to look favorably upon the entire cancer program which is being presented to you today, and I would hope that you would recommend that it be supported generously, not only from the standpoint of the chemotherapy program but from the standpoint of basic research and from the standpoint of training grants.

NEED TO INCREASE FUNDS FOR INDIRECT COSTS

I would urge, too, that you raise the indirect costs to 25 percent which is very necessary in order to keep our scientists and the institutions in which they work interested in this very important problem.

I have no doubt that these dedicated people will, in time, provide the answer if the Congress will provide them with the tools with which to do their work.

Senator HILL. Thank you, Doctor. Any questions, gentlemen, or shall we hear from the others and then have questions?

Senator THYE. There would be just the one question right here for Dr. Ravdin. That is, how many dollars could you use in the field of research on cancer if it were available and you knew it was going to be available for the next 3 years? We cannot bind it on the Congress; but if it was the opinion of this committee as well as you and your associates that it would be forthcoming for the next 2 years after this year's appropriation, what could you use to good advantage?

Dr. RAVDIN. We have given this a good deal of thought, and Dr. Farber is going to testify on the funds necessary for this program.

Senator THYE. You mean Dr. Farber will answer that?

Dr. RAVDIN. He will answer that.

I would like to say this to you, Senator Thye: We can assure you that those of us who played a part in the allocation of funds through one agency or another in the past will do our best to see that these funds are spent wisely.

Senator HILL. As I understand, Dr. Farber, in your testimony you give us a detailed breakdown of the funds that you gentlemen feel are needed and that you feel we should appropriate, is that right?

Dr. FARBER. Yes, sir.

CANCER RESEARCH

STATEMENT OF DR. WENDELL M. STANLEY, PROFESSOR OF BIOCHEMISTRY AND DIRECTOR OF VIRUS LABORATORY, UNIVERSITY OF CALIFORNIA, BERKELEY, CALIF., AND MEMBER, BOARD OF DIRECTORS, AMERICAN CANCER SOCIETY

BACKGROUND OF WITNESS

Senator HILL. Dr. Stanley, I may say, as we know, has been with us before. We are always honored to have him here. He is professor of biochemistry and director of the virus laboratory at the University of California at Berkeley and a member of the board of directors of the American Cancer Society.

He is also a Nobel prize winner.

Doctor, we are delighted to have you here and we will be delighted to have you now proceed in your own way, sir.

Dr. STANLEY. Thank you, Senator Hill. Perhaps, also for the record, I should indicate that I am presently serving as Chairman of the Board of Scientific Counselors of the National Cancer Institute.

Senator HILL. Yes.

Dr. STANLEY. I, like these gentlemen, served a term on the National Advisory Cancer Council.

Senator HILL. That is right.

PREPARED STATEMENT

Dr. STANLEY. I have a prepared statement. It is a little long, and I do not propose to read it.

Senator HILL. We will have it appear in the record in full at this point and then have you proceed in your own way.

(The statement referred to follows:)

STATEMENT BY DR. WENDELL M. STANLEY WITH REFERENCE TO THE GENERAL SUPPORT OF THE NATIONAL CANCER INSTITUTE AND WITH SPECIAL REFERENCE TO RELATIONSHIPS BETWEEN CANCER AND VIRUSES

I am presently serving as Chairman of the Board of Scientific Counselors of the National Cancer Institute and earlier I served a term on the National Advisory Cancer Council. I should first like to discuss relationships between viruses and cancer and then make a few remarks regarding the general support of basic medical research.

The first direct causal relationship between cancer and a virus was established experimentally in 1908 by Ellerman and Bang in their work on the transmission of fowl leukemia by means of cell-free preparations. Unfortunately this important experiment failed to have the impact on contemporary investigations that it should have because the neoplastic nature of this disease was not then clearly recognized. However, shortly thereafter, in 1911, Peyton Rous, working at the Rockefeller Institute, found that a sarcoma that appeared spontaneously in a Plymouth Rock chicken could be passed from chicken to chicken by means of cell-free filtrates. Clearly here was a malignant growth caused by a virus or virus-like agent. At first chickens closely related to the chicken in which the sarcoma originated were necessary for successful transmission but later this virus was adapted to other kinds of chickens and to other types of fowls such as ducks, turkeys, and pheasants. In some cases this involved several passages in the new host by means of cells before it became possible to pass the sarcoma by means of cell-free filtrates. Although for some years this caused much doubt regarding the true relationship between the virus and the sarcoma, the Rous virus did serve to set the pattern and today tumor viruses of chickens and other avian species are accepted without question. Important advances with this virus are now being made at the National Cancer Institute. In addition the situation with respect to fowl leukemia has been clarified somewhat although areas of uncertainty still remain. Beard and associates have concentrated and purified 2 distinct viruses, 1 responsible for myeloblastic leukemia and the other responsible for erythroblastic leukemia. Burmester has secured evidence which indicates that lymphomatosis is characterized by a group of related viruses. It is possible that all or most of the avian leukemia and tumor viruses including the Rous virus may be related more or less closely.

In 1932 Shope found a fibroma of rabbits which was caused by a virus. Later on Berry and Dedrick reported that inoculation of a mixture of heat-inactivated myxoma virus and active fibroma virus resulted in myxomatosis. This very interesting situation is still greatly in need of further experimentation. In 1940 Duran-Reynals noted that inoculation of newborn rabbits with small doses of fibroma virus caused tumors or generalized fibromas whereas larger doses of the same virus caused necrotic inflammatory lesions, not too different from those caused by myxoma virus. This work was the forerunner of much important work work of a similar nature with still other viruses by Duran-Reynals.

In 1933 Shope discovered in our native wild cottontail rabbit the now famous papilloma virus of rabbits. This virus causes a benign tumor or papilloma in the wild rabbit which only occasionally develops into a malignant growth with metastases. However, inoculation of domestic rabbits is followed by the development of papillomas which, unlike those in wild rabbits appear to contain no infectious virus and which almost always progress into cancers and in these there still seems to be no infectious virus. Immunological evidence for the existence of a virus in the domestic rabbit papillomas and cancers has been obtained by Rogers, Kidd, and Rous. Furthermore Rous and Friedewald have found that the cancers derived from papilloma virus infected rabbit cells on treatment with chemical carcinogens or tar were of the same type that arise from these cells spontaneously after a much longer time. This work would seem to indicate that the chemical carcinogens acted by way of the virus. The rabbit papilloma virus has been concentrated and purified and many of its biochemical and biophysical

properties have been studied. Needless to say, the unusual opportunity which is provided by this system to study the transition from a benign virus induced papilloma to a malignant growth has been and is still being extensively investigated. During recent years papillomas of the skin and oral mucosa of several different animals, such as horses, cows, dogs, and rats, have been found to be transmissible by means of filtrates. Unfortunately these have been little studied, hence the extent as well as the importance of these viruses remains in doubt. A recently reported very interesting virus is one discovered in 1955 by Shope which causes fibromas in deer.

In 1934 Lucké reported the isolation of a filterable agent from an adenocarcinoma of the leopard frog. It is of some interest that inoculation of this virus into distant sites of the leopard frog yielded no local tumors but did yield kidney carcinomas and that inoculation of other kinds of frogs yielded no tumors. In 1936 Bittner discovered the agent in the milk of mice which seems to be responsible for the development of breast cancer in mice many months after incoulation of the agent. However, genetic and hormonal factors have been found to play an exceedingly important role, so much so that some situations are known in which breast cancer is present without demonstrable virus and in other situations virus can be inoculated without the subsequent appearance of breast cancer. While there is no doubt with respect to the existence of a virus that can cause breast cancer in mice under specified conditions, our knowledge of the interplay between viral, genetic, and hormonal factors leaves much to be desired.

Black in 1945 described a leafhopper transmitted virus that would cause tumors on the roots of sweet clover plants as well as in many other plants. The tumors caused by this wound-tumor virus were found to differ from the outgrowths known earlier in certain tobacco and sugarcane diseases in that they seemed capable of indefinite growth as unorganized tissue. Black has pointed out that striking similarities exist between the wound-tumor disease and mammary cancer in mice in that virus plays an important role in each, but that genetic and hormonal factors can have a tremendous influence on the virus-host reaction.

In 1951 Gross reported that the inoculation of newborn mice of strains free of leukemia with cell-free filtrates of extracts of leukemic organs from mice of a high leukemic strain resulted in leukemia within 1 or 2 years. Stewart, Eddy, and Law at the National Institutes of Health and several other investigators have devoted much time and effort to studies of this mouse leukemia and it now appears likely that several viruses causing different kinds of tumors are actually involved and that the genetic factors and age of the host play a much more important role than suspected earlier. The separation and recognition of the different viruses or virus strains and their corresponding diseases and the elucidation of the role played by genetic factors represent problems of the first magnitude. However, today, there seems to be no doubt but that these mouse viruses can cause cancer and this is, of course, the important fact for the present discussion. This work is being pushed very vigorously at the National Cancer Institute.

Friend has recently reported the discovery of a filterable agent which will induce leukemia in mice of any age as soon as 2 or 3 weeks after inoculation. This remarkable agent was found during the course of studies on the effect of cell-free preparations of the Ehrlich ascites tumor in infant Swiss mice. Since infant mice are not necessary and because of the rapidity with which the disease develops, this virus would appear to possess definite advantages for exploratory experimentation over the viruses which Gross has investigated.

This very brief review of cases in which there is good experimental proof for a direct causal relationship between viruses and cancer in animals and plants should be sufficient to secure acceptance of the fact that viruses can cause cancer. Now it is necessary next to appreciate that basic biological phenomena generally do not differ strikingly as one goes from one species to another, and hence that the fact, now proved beyond contention, that viruses can cause cancer in animals is directly pertinent to the human cancer problem. Recent advances in the cultivation of human cells in vitro and especially the newer knowledge of certain properties of viruses warrant today a marked change in our thinking on the problem of human cancer. The time has come when we should assume that viruses are responsible for most kinds of cancer and design and execute our experiments accordingly. Cancer is basically a problem in growth, and there is no reason to believe that the growth of most human cells is different basically from the growth of most animal cells. Acceptance of the viral etiology of human cancer as a working hypothesis will involve a marked change in attitude on the part of many investigators, but this is necessary if the right approach and the right design of experimentation are to result. What we do depends in large measure upon what we think.

Needless to say, the cultivation of human cells in vitro opens up wonderful experimental possibilities. The work of Earle of the National Cancer Institute on tissue cultures and Gey and associates on HeLa cells has stimulated much activity in the cultivation of human cells. We have, in our own laboratory, about a dozen different kinds of normal and malignant cells of human origin under cultivation. While most of these are being used for studies on the effects of known viruses, it is obvious that such cells can be examined for the presence of hitherto unknown, as well as known, viruses or can be used as test materials for suspected human viruses. The human amnion cell, which my colleagues Elsa Zitcer, Jørgen Fogh, and Thelma Dunnebacke first obtained from the full-term amnion in cell culture, is proving of great use in this connection as well as in studies on the transition from a normal to a potentially malignant cell. For example, we are finding interesting changes in chromosome number and in ability to grow in cortisone or X-ray treated animals as these human amnion cells are passed in culture. Many other laboratories have normal and malignant human cells under cultivation and significant new findings may be expected to result from this new and potentially extremely powerful experimental approach.

One sometimes hears the argument that cancer viruses do not exist in human beings, because if they did exist, someone would have found them by this time. Some attention might have been given to this argument some years ago, but not now, for literally dozens of hitherto unknown human viruses have been discovered during the past year or so. The typing program for polio viruses during which extracts of stools from hundreds of patients were used to inoculate monkey kidney and occasionally other cells in tissue culture resulted in the discovery of dozens of enteric viruses, known as the ECHO viruses. Another group, consisting of many viruses isolated in a similar fashion, but from the upper respiratory tract of man, is known as the APC or ARD viruses or more recently as the adenoviruses. Still a third group of viruses has been isolated from samples of human sera. Thus we have today many more human viruses than we know what to do with, hence there is now certainly no reason to shy away from giving consideration to viruses as causative agents in cancer for lack of the viruses. Actually these recent developments lead one to suspect that there are many more undiscovered viruses present in presumably normal human beings.

The finding that the APC viruses had a cytopathogenic effect on a human cancer cell, the HeLa cell, suggested to Huebner and other scientists at the National Institutes of Health that these viruses might have some effect on similar cells in human beings. It was found that the injection of these viruses into a cervical cancer mass or into the blood stream resulted in the disintegration and disappearance of most of the cancerous mass. However, all of the cancer cells were not destroyed by the time that neutralizing antibodies to the virus developed and these served to protect this residual cancer. Earlier work by Southam and Moore had shown that the inoculation of human beings carrying a cancer with certain neurotropic viruses sometimes caused regression of the cancer. Work of this general nature is just in its infancy, but the fact that infection of certain cancer cells with certain viruses causes the destruction of the cancer cells is most significant. Because of the well-known plasticity of viruses it should be possible, by means of already known passage techniques, to develop viruses having no effect on normal cells, but with a special predilection for the destruction of cancer cells. Several laboratories are already engaged in work of this type.

Now, of course, there are direct approaches to the human cancer problem which should be continued and even intensified in view of several interesting experimental results. Two groups of investigators, Dmochowski and associates and Gross and coworkers, using the electron microscope, have concluded that more particles sedimentable by means of high speed centrifugation are present in breast tumors and milks from women with breast cancer than in milks from apparently healthy women. Bostick has evidence for the presence of a filterable agent capable of causing disease in mice in extracts of lymph nodes from persons suffering from Hodgkin's disease. Schwartz has also reported experimental evidence for a filterable agent in the brains of persons dying of leukemia which will cause leukemia in mice at a time when normally there would be no leukemia. Dmochowski as well as others have obtained electron micrographs of thin sections of lymph nodes of children suffering from leukemia which show particles similar to those found in similar sections from leukemic mice. Whether or not these particles as well as others seen in electron micrographs of thin sections of centrifugally concentrated extracts of different kinds of human cancer tissue actually represent viruses is, of course, not known. Unfortunately there currently is a tendency to read too much into such findings. It must always be remembered that the cardinal attribute of a virus is its ability to cause replication and in the

absence of proof that a given characteristic particle can bring about replication of itself and cause the disease the particle should not be referred to as virus. The approach involving the direct examination of human material will, therefore, encounter many difficulties, but in view of the great advances in tissue or cell culture techniques I believe not only that the approach should be made but that the activity in this area, especially in leukemia of children, should be intensified. However, there is a strong possibility that human cancer, in part, may require new and different approaches. The relationships involved in animal, bacterial, and plant viruses should be examined carefully for biologically analogous situations which may obtain in human cancer. Certainly we know that man had coursing through his body many viruses which were unknown a few years ago and we do not know what many of these are doing there. We know that viruses can persist in their host for generations, in either an infectious or noninfectious form. We know that viruses can mutate to form new strains that cause different disease symptoms. We know that viruses may have different effects depending on the age, genetics, and state of nutrition and hormonal balance of the host. We know that different carcinogenic agents can activate subinfectious or latent viruses or prophages with subsequent cellular destruction. It would appear that the activation of prophages by certain chemical or physical agents with development into a fully infectious bacterial virus and the consequent destruction of the bacterial cells, as well as the phenomenon of transduction by free deoxyribonucleic acid in the pneumococcus and by bacterial viruses in Salmonella are pertinent to the human cancer problem, especially so in view of the recent discovery of dozens upon dozens of new viruses of man. It is difficult to escape the conclusion that viruses may be the etiological agents for most, if not all, cancer, including cancer in man, and that this represents, by far the most intellectually satisfying working hypothesis which is consistent with all presently known facts. Of the greatest importance is the fact that acceptance of viruses as etiological agents in cancer generally as a working hypothesis will stimulate new experimental approaches to the cancer problem, which have been long neglected and which are only now getting started in several laboratories. Could it be that the recent discovery of dozens of hitherto unknown viruses of man which seem to be coursing through our bodies from time to time is but the forerunner of the discovery that specific nucleic acids within our cells, perhaps even of exogenous genetic origin, acquired by transduction or a related phenomenon, have a relationship to our cancers? Needless to say, what we do in the way of experimentation depends in large measure upon what we think and I am sure the time has come when we should change our thinking with respect to the nature of cancer-virus relationships.

I believe that at long last there has been such a change in attitude with respect to the necessity for exploring virus-cancer relationships that it is unnecessary to make a special plea for additional funds earmarked for virus research. I believe that if additional funds for the general area of research projects are provided, the work in the virus field will find its natural support. However, I should like to support the recommendation of the Citizens Committee with respect to a 30 percent increase in funds for research projects, and increases for research fellowships and for training grants for research in cancer as well as the increase for intramural research at the Cancer Institute. The time has long since passed when attention should be given to the matter of adequate overhead. I favor an increase to the 25 percent level for fiscal 1959 and a review with the view to increasing this figure to around 30 to 35 percent for fiscal 1960.

Now I understand that it is not possible to bind future Congresses to financial commitments some years hence. However, it would have a tremendous beneficial influence on the medical research of this Nation if each Congress would increase the level of funds available for medical research on some regular basis rather than, as has happened, to have a large increase in 1 year and no increase or even a decrease in another year. Research is not something that can be turned on and off at will if one is to achieve maximum benefits and efficiency. Extraordinary effort should be made, therefore, to achieve a gradual. sustained increase in research support at a level that can be absorbed at maximum efficiency by the universities and other research organizations of the Nation. This is the only way the true research potential can be developed to the fullest and in this age of direct scientific competition with the U. S. S. R. we must develop our maximum potential if we are to survive as a free nation.

The arrangements which I supported most vigorously and which now permit 5-year commitments, subject only to the appropriation of funds by Congress, for research grants have had a most beneficial effect on the medical research communities of the Nation. Now it is possible for distinguished investigators

of demonstrated accomplishment to plan long-term research projects without having to worry about a sudden termination of support. The next step which I believe necessary is to make block grants of unrestricted or free money to our universities and especially to our medical schools for use at the discretion of university authorities for the general support of the research activities. The amount of funds earmarked for special research projects has reached such proportions that the flexibility in operation needed in a first-class research organization is gradually being impaired and the only way I see to rectify this is to provide a certain percentage of support in the form of unrestricted or free money. Our medical schools and universities have certainly demonstrated their competence to do the basic medical research needed so desperately by this Nation and they certainly merit support in a form that will permit them to live up to their responsibilities without bringing them under centralized control as in Russia.

Finally, may I say that I favor a continuation and enlargement of the matching grants for the construction of medical research laboratory facilities.

RELATIONSHIPS BETWEEN VIRUS AND CANCER

Dr. STANLEY. I will just speak briefly about the points which are taken up in the statement to provide a background of information for you in case you have questions, and perhaps provide a springboard for those.

My primary purpose is to make myself available for any discussions that you would like to have with respect to the area of research that is attracting an increasing amount of attention and that is the area involving relationships between viruses and cancer.

Then I would like to make a few remarks later on toward the general support of cancer research and basic biological research generally as well as a remark with respect to construction funds.

The idea that viruses might have a relationship to cancer is an old idea. It came about the time that viruses were first discovered, and that was essentially right after the turn of the century.

CANCER-CAUSING VIRUS IN CHICKENS

The first discoveries has to do with viruses that caused cancer in animals. The first one was a virus disease of chickens.

This is of no small consequence, even today, because virus diseases of chickens account for literally a few hundred million dollars of loss to the poultry industry. But they are more important to us for another reason, and that is that they have provided us with an experimental model to test the basic idea as to whether cancer can result from a virus. Subsequent to the work with chicken viruses, the most memorable of which was the discovery by Peyton Rous of the famous chicken sarcoma virus, there has been discovered a literal series of virus-induced cancers of animals.

RABBIT FIBROMA VIRUS

The Shope rabbit fibroma virus was discovered in 1932. A year later, Dr. Shope discovered the famous papillomas virus. This virus has interested us very much because it causes, initially, a benign growth, but in domestic rabbits the invariable progression is a benign growth becoming cancerous. This is frankly initiated by a virus.

The transformation from the benign growth to the cancer is accompanied by the disappearance of the virus as an infectious agent as normally determined. However, it can be proved by indirect methods that the cancer still has the virus in it. This is a wonderful experi-

mental model, because of the vagaries we run into in the human species.

SPECIFICITY OF VIRUSES

Then, with respect to another problem that may be important in our work with viruses and cancer is the tremendous specificity of certain cancer viruses. One of the best examples is one discovered in Dr. Ravdin's hometown by one of his colleagues, Dr. Lucke, in 1934. He was working with a disease of frogs, and not frogs generally, but the leopard frog, a particular species of frog. He found a kidney cancer in this animal was virus induced.

Here it was so interesting because you could take the virus and apply it in any route that you would choose. You could inoculate it anywhere. Nothing would happen, except in the kidney. You would have a cancer there. From that cancer you could make a cell-free filtrate and apply it to other frogs. But it will cause the disease only in the leopard frog. If you put it in certain other kinds of frogs, nothing happens.

So you must get the idea of high specificity with respect to some of these viruses. They are not confined to animals, because we have 2 or 3 examples of frankly tumorous growths in plants, again caused by a virus.

PLEA FOR STUDY OF VIRUS IN HUMAN CANCER

This led me, in 1955, when I had the opportunity at the National Cancer Conference in Detroit, to assemble all of these facts and present them to 1,600 clinicians from all over the world and make an argument at that time, a plea, for utilizing that basic information and applying it to the human-cancer problem.

This had not been done before. People had just closed their eyes to a great variety of basic biological information. They seemed to believe that man is set far apart from the lower animals, and that things you learn about cats, dogs, and fish, and so forth, have no application to man.

I made a plea for using that knowledge for the betterment of mankind. I indicated that, so far as those parts that go to make up our body, that is, the cells, there is not too much difference between the growth of a cell in a dog or a rabbit and a similar cell in man. I also indicated the strong belief that nature is such that, despite, perhaps, our desire to think of ourselves as unique creatures, Nature is such that she probably does not recognize a strict difference between man and all the rest of life on earth.

I felt, because viruses had been found to cause cancer in all other forms of life with a few exceptions, it was not logical to assume that man was not also susceptible to viruses that could cause cancer.

TISSUE GROWTH IN TEST TUBES

I need not tell you that you cannot do with man the experiments that you can do with animals. We had, up until recently, a bottleneck there. You do not deliberately infect a man with something that you think is going to cause cancer. But, fortunately, about this time the ability to grow pieces of man in test tubes came into being, largely through work carried out here at the National Institutes of Health in the National Cancer Institute by Dr. Earle.

So you can grow human cells in the test tubes, in tissue culture, and do a variety of experiments with them. You can test them for viruses, or, if you have a potential extract of man that you think might contain a virus, you can test it on human cells. You do not have to endanger the whole man, but you can make those tests. This has opened up a new era, it seems to me, in the potentialities for studying the possible relationships of viruses to our human cancers.

This was also accompanied by the discovery during the past 4 or 5 years of literally dozens upon dozens of viruses that nobody knew existed prior to that time. I used to hear some of my colleagues state that, if human cancer is due to a virus, somebody would have found the virus, certainly, by this time. Yet this great array of viruses we call the adeno viruses, that we get from our upper respiratory tract, and the echo viruses we get from our stools, these were unknown and discovered only recently.

DIFFICULTY OF STUDYING VIRUSES

Here we are just teeming with viruses easily accessible and yet we did not find them until recently. This means to me that cancer viruses, if they exist, probably will be more difficult to discover. But knowing that easily discoverable viruses were only found recently should not make us take the position that human cancer cannot be due to a virus because of the lack of the viruses. We have found many, many of them and, in some cases, we do not know what they are doing, and it is up to us to find out.

What about the situation with regard to examining human beings directly? There are a few straws in the wind now, such as the work that Bostich did at the University of California with Hodgkins disease, where he has isolated something from patients with Hodgkins disease that he can inject into and produce a Hodgkins-like disease in mice. Nobody knows whether or not this is related to human Hodgkins disease, but it is imperative to find out what that material is that he gets consistently from Hodgkins disease patients.

Dr. Schwartz in Chicago is isolating a viruslike material from the brains of human beings who have died of leukemia. Again, we do not know the relationship of this virus to human cancer, but this is crying for experimental study because we must find out whether or not there is any relationship.

NEW METHODS OF EXAMINATIONS

Then recently people have been talking about the development of the electron microscope and techniques by means of which you can take a cell and slice it into literally thousands of individual little slices just as you take an orange and slice it many times. These individual slices can be examined by means of the electron microscope by the so-called "thin sectioning technique."

Examination of the lymph nodes of mice dying of leukemia show innumerable small little particles. There is reason to believe that these do represent the virus, the mouse leukemia virus.

This inspired a few investigators to make similar examinations, using this newly developed technique, of the human lymph nodes of persons suffering from human leukemia.

There, again, they are finding the same thing that they found in the mice.

Nobody knows whether or not those little particles represent viruses, and if they do represent viruses, whether or not it has anything to do with human leukemia. But, again, this is an area that is crying for exploration. It takes highly trained people to make these studies.

I believe that we are now in a very exciting era where it is almost impossible to foretell the future.

NUCLEIC ACID AND VIRUS ACTIVITY

In the last couple of years in the Berkeley virus laboratory we have been able to take a virus and break it down into component parts and to show for the first time that a nucleic acid carries this virus activity.

If you do not quite understand what a nucleic acid is, it is a component inside of the center of your cells which goes largely to make up your chromosomes which determine really what you are.

This discovery in the virus field having to do with nucleic acid has been characterized by some people as representing a milestone in biological science as significant as that of the discovery of nuclear energy in the physical sciences.

I did not make the statement myself first, but it having been made by 2 or 3 fairly distinguished individuals, I can at least say that I believe that it is probably true.

BASIC RESEARCH IN NUCLEIC ACID

Research in nucleic acid chemistry is basic and fundamental. I believe that in the structure of nucleic acid you have the message written for all of life as it exists today, but more importantly, the transition from the normal cell to the malignant cell.

Here we have a recent example where chemotherapy and virology come very close together. One of the compounds developed in the chemotherapy program, fluorouracil, interested us because it is a biological analog of one of the components of nucleic acid.

We have used this material and fed virus infected plants with it. Much to our surprise, one of the uracils in the nucleic acid could be substituted by fluorouracil. The amount of the virus was decreased to one-half.

The most important things, and again this is one of the straws in the wind so you cannot tell where it is going to lead, so far as we can detect, all or practically all the fluorouracil that is added goes to the virus and not to the normal protein of the host.

This tells you a lot about the nature of chemotherapeutic agents. Is it effective because it goes into an abnormal protein, protein which is not normal to the cell, a protein which is characteristic of the cancer cell? Again, we do not know this answer. But we have experiments that we can do, and we should be doing them.

Now, if I just may make one or two brief comments, there will be presented a suggestion based upon a citizen's committee recommendation. I would like to support most vigorously the items that will be presented there.

INDIRECT COSTS OF RESEARCH

I would like to make a very special plea for the recognition of the indirect, or if you want to call them the direct, costs of doing research. The suggestion is being made that this be increased to 25 percent.

I would certainly urge the immediate acceptance of that with a view to paying the true costs of doing research, which will be a tremendous aid to our institutions of higher learning who are doing biological and medical research.

I believe that the large increase in moneys that has been made available to these organizations for a project or for contract research is now starting to warp a bit the organization within the research organizations, and that this added money, which will enable them to better equip their libraries and provide better facilities and so forth, is certainly very badly needed.

The question has been asked about the amount of money we can spend this year, the next year, and the year after. Here I would like to make a special plea.

SUSTAINED EFFORT NECESSARY

Senator THYE. May I interrupt you at this point, Doctor, please?

Dr. STANLEY. Surely.

Senator THYE. The only reason I put 3 years down was on the basis that you would then be able to more orderly lay out a program of research; whereas, if you were to get a large sum this year and not be certain of the next year, you could not program intelligently. That is the reason I asked the question.

Dr. STANLEY. I agree wholeheartedly with those comments. I have, in this prepared statement, "Research is not something that can be turned on and off at will if one is to achieve maximum benefits and efficiency. I believe extraordinary effort should be made, therefore, to achieve a gradual, sustained increase in research support that can be absorbed at maximum efficiency by the universities and other research organizations of the Nation. This is the only way the true research potential can be developed to the fullest, and in this age of direct scientific competition with the U. S. S. R., we must develop our maximum potential if we are to survive as a free nation."

One recent development coming from the NIH has been the increasing use of the 5-year grants. This I supported very vigorously when I was on the cancer council, and I believe this has had a very beneficial effect on the research planning of our scientists in the medical and biological sciences.

I suspect that perhaps not his year, but possibly by another year, we may entertain the idea of supplying our research organizations, our medical schools, and biological and medical research organizations with blocks of so-called free money at some level which would be consistent with their total research potential. That is, the money which would be used would be at the discretion of the individual research organization, the medical school or the university, to foster their total research activities.

I think the first thing that should be done is to take care of the indirect or the full costs of research. As soon as this is done, I think we should begin to think in the larger terms of providing these unrestricted or free money grants.

GRANTS FOR FACILITIES' CONSTRUCTION

Then, finally, I believe that in order to utilize the full scientific, medical, and biological science manpower already existing in this country, there is a need today to continue the matching grants for the construction of biological and medical research facilities.

If I could just take a moment to show you some pictures so that you will have some idea of the sort of thing I am talking about, I would like to do it. This represents eight viruses, all at the same magnification. They are purified viruses so that you see the virus particles themselves. This one is vaccinia virus that is used to vaccinate or protect you against smallpox.

This is a crystalline insect virus. This is influenza virus, the virus which in 1918 caused the deaths of more people in 4 months in this country than we lost during all of the two great world wars on the battlefields. One little virus can do that.

These are the phages viruses, T_2 phages and T_3 phages that I had the good fortune to put out in crystal form.

This is poliomyelitis virus which we crystallized in the Berkeley laboratory.

Here is a specially large and beautiful picture of poliomyelitis virus.

POLIOMYELITIS VIRUS

Senator HILL. You speak of the poliomyelitis virus now. If you had not first found that virus and isolated it, it would not have been possible, would it, for Dr. Salk to come forward and finally get his Salk vaccine, would it?

Dr. STANLEY. I think the knowledge of the physical and basic biochemical, biophysical, properties was useful.

Senator HILL. But it was more or less basic, was it not, to what was afterward done?

Dr. STANLEY. I think the basic knowledge of viruses was very important in this whole development, sir.

This purified material is now, of course, available for, I think, a very good polio vaccine that can be uniformly made of high potency.

There are some other crystals. These are some of the poliomyelitis viruses.

These needlelike viruses are tobacco mosaic and bushystunt.

This is magnification of one-hundred-thousand-fold. In real life, if you take 100,000 of these end to end, that is 1 inch of real life. These are the things when I talk about viruses that can give you some idea of the great variety of sizes and shapes.

Just imagine that you can take this and take one-fortieth of it, which is the nucleic acid part, and that alone can cause the infection and reproduce the nucleic acid plus the protein overcoat which eventually it wraps itself around.

NEW DEVELOPMENTS

Now the new developments—and this I think may enter the cancer field—is that we now believe that some virus infections can take place by a transfer from cell to cell, not of these large structures that you see here, but of the nucleic acid alone. It is a hidden kind of virus which is not susceptible to antibodies, for example.

We may have in cancer, in some kinds of cancer, this particular situation, and there are beginnings of evidence which would indicate that.

If this is so, then we are dealing with structural nucleic-acid metabolism. I think, again, the chemotherapy program that Dr. Farber has been interested in and the program in virology come very close together.

Thank you.

Senator HILL. Doctor, I always note that you distinguished scientists are very modest and always very conservative in what you say. In other words, you realize the uncertainties in this field of research and the uncertainties of what you might get and what you might not get. I was very much impressed that you used the word "exciting" in speaking of this period, as I understand it, and then at a later time you used the word "serious," leading me to believe that you feel that at least without being able to know or commit yourself to it that the chances are that if we press with this research, as you gentlemen suggest here today, and you have played such a large part of in the past, that perhaps wonderful dividends may come to us from your work and your labors and from the funds that may go into this research.

Do you feel that way?

Dr. STANLEY. I am convinced of that; yes, sir. You see, our laboratory is essentially a fundamental research laboratory, and yet out of the virus laboratory came the influenza vaccine at a time when we could not afford to have half of our Army flat on its back with influenza as happened in 1918.

This came out of fundamental research. The biological houses could take that over and develop the vaccine of great practical value in the same way the information on poliomyelitis virus itself is proving of great practical value.

So even though we do not hit directly for practical results, they also flow from fundamental research. You just cannot help, but when you find out facts of nature, those facts sooner or later are going to be tremendous to society.

Senator HILL. You are practically saying that just as this building has to have its foundation, you have to have your basic research.

Dr. STANLEY. Oh, yes; you would never have the building if you did not have the foundation under it.

Senator HILL. Any questions, Senator Stennis?

Senator STENNIS. I cannot think of any now. I have enjoyed this wonderful testimony.

Senator HILL. Senator Smith.

Senator SMITH. Not right now, thank you.

Senator HILL. Dr. Farber.

Cancer Research

STATEMENT OF DR. SIDNEY FARBER, SCIENTIFIC DIRECTOR AND PROFESSOR OF PATHOLOGY, HARVARD MEDICAL SCHOOL AT THE CHILDRENS' HOSPITAL; CHAIRMAN, COMMITTEE ON CANCER CHEMOTHERAPY; MEMBER, NATIONAL ADVISORY CANCER COUNCIL

PREPARED STATEMENT

Senator Hill. Dr. Sidney Farber, professor of pathology at Harvard Medical School at the children's hospital, chairman of the committee on cancer chemotherapy and member of the National Advisory Cancer Council.

Doctor, we would be delighted to have you proceed in your own way.

Dr. Farber. Thank you very much, Senator Hill.

Members of the committee, with your permission, may I put into the record a prepared statement and then select portions of it for summary?

Senator Hill. Your prepared statement will be carried in full in the record.

Dr. Farber. Thank you, sir.

(The statement referred to follows:)

It is with gratitude that I acknowledge the privilege of appearing once more before you, Mr. Chairman and gentlemen of the Senate committee, in support of the citizen's budget of the National Institutes of Health as a whole, and in particular of that of the National Cancer Institute. I would like to record the appreciation of scientists, and physicians to Senator Hill and members of this committee, and to Congressman Fogarty and the members of the House committee for their leadership and understanding in evaluating the magnitude of problems of disease and the capacity of the scientists and physicians of the country to find solutions to these problems. Without the wise action of the Congress in providing support for research, hospital and laboratory construction, and now hopefully medical school construction, and for the training of thousands of scientists and doctors throughout the country in splendidly conceived training grant programs, the heroic efforts of the voluntary health agencies and of private institutions would fall woefully short of the goal. In no area of human activity in our country is there a better expression of the concern of our people for our people than in the growth of the National Institutes of Health programs through congressional action since the end of World War II.

General research grants and general research training grants

Mr. Chairman and gentlemen. This morning experts testified before your committee in behalf of increased appropriations for research grants and research training grants in the noncategorical areas grouped together under this heading. May I speak in unqualified support, after careful investigation on my own part, of the citizens' recommendation of an increase from $9½ million to $20 million for general research grants, and an increase from $2½ million in general research training grants, and express the hope that these 2 recommendations will be recognized in line items in the budget? Expansion in these noncategorical areas will produce results of importance to the several categorical institutes, such as cancer, heart, and the like. In these noncategorical areas are to be found the scientists and research physicians who can be drawn to the various categorical areas. In addition, they conduct research of fundamental importance to those who are concerned with more specific goals. This increase, if granted, will receive universal approval among scientists and physicians. Favorable action in this vital area represents one of the great opportunities for the Congress to foster and to further research in the training of scientists in the colleges, the universities, the medical schools, and research institutions of the country.

Administration of research grants in the National Institutes of Health

No administrative achievement in science and medicine in recent years exceeds the accomplishment of the Grants Division of the National Institutes of Health. This division is staffed by a group of devoted public servants, highly skilled in their chosen fields, under the splendid leadership of Drs. Ernest Allen, C. J. Van Slyke, and James Shannon, under the Surgeon General, Dr. LeRoy Burney. Their activities are guided by the recommendations of juries of scientific peers of those who apply for support. The project grant, like the DC–3, has proved to be the tried and true workhorse of the program. It should continue. In addition, on the recommendation of the citizen advisers, working with the staff of the National Institutes of Health, a series of improvements in the grant structure have been made year by year, all in the direction of bringing more effective support to the scientists of the country with the resources appropriated by the Congress. Devices have been found to make more flexible, regulations which are designed to accelerate research. Large program grants in well defined areas have been awarded to investigators of proved scientific achievement. I should like to record my own opinion here, that this direction of program support should be developed to greater long term support of those research groups, or research institutions in the country, which are capable of accepting the kind of responsibility accepted by each of the several institutes in the National Institutes of Health in Bethesda. If my understanding is correct, funds are appropriated by the Congress to be spent in and through the several institutes of health of the National Institutes of Health. The remarkable development, in which this country takes justifiable pride, in the National Institutes of Health in Bethesda, and in their great Clinical Center, has very nearly reached its greatest fulfillment. I would suggest that the effectiveness of these institutes can be increased in the future by the official support through these institutes of independent programs, in independent institutions, throughout the country, working under the same framework of regulations and support as those which govern the grants program. Examples of this suggestion are to be found in England today, and modifications are found in the history of the National Institutes of Health itself. The time has come, I believe, to put on a strong and economically sound basis the decentralized programs of research in the wealth of private colleges, universities, medical schools, and research institutions in the many parts of the country which possess the proper environment, the leadership, and the invaluable traditions of academic achievement. This recommendation requires no more money than that mentioned in the citizens' budget, if administered in the spirit of the National Institutes of Health's grants program of the past. This logical move should in no way interfere with the academic freedom of institutions throughout the country. It should provide the range of support that will permit the badly needed expansion of research in this country if we are to make as rapid progress in the solution of the problems of disease as the problems demand.

Indirect costs

With the permission of the chairman and members of this committee, I should like to record the opinion of the members of the National Advisory Cancer Council, and of large numbers of scientists and physicians with whom I have talked all over the country, concerning the level of indirect costs. They agree that a full reimbursement of indirect costs should be made according to a formula which we understand is presently under study by Mr. Killion and his Committee. The exact amount of this is not pertinent to our discussion today. The same formula for reimbursement of full indirect costs should apply to the National Institutes of Health that applies to all other governmental supported research. Without laboring the point, Mr. Chairman and gentlemen, I should like to state that if this problem of full indirect costs is not solved without reduction in the amount of money for research, the quantity and quality of research throughout the country will suffer, and scientists will be prevented by trustees and administrators of institutions already overburdened by their struggles against hospital and medical school deficits, from accepting still further expansion of research of the kind so badly needed.

Citizens' recommendation of a budget for the National Cancer Institute for fiscal 1959

My distinguished colleagues, Dr. I. S. Ravdin, and Dr. Wendell Stanley, are talking today concerning the status of research in the field of chemotherapy of cancer, and the virus causation of cancer. These two areas contain the most exciting and the most promising activities in cancer research today. There are a number of other areas and subdivisions of these two fields which are being supported through the grants program of the National Cancer Institute; areas con-

cerned with epidemiology, nutrition, basic endocrinological considerations, and research concerned with the internal control of mechanisms responsible for cancers of the endocrine organs and target organs such as the breast, and the prostate. Studies concerned with life history and biologic behavior of tumors, the development of more effective surgical and radiotherapeutic techniques, and the whole area of radiobiology should be mentioned. The selection of a few fields for discussion in no way implies either a lack of interest in, or a neglect of a number of other directions of research which may be even more important than those we are discussing today. It is quite probable that the goals to be achieved in the problem of cancer will be reached eventually by more than one route.

Our immediate goals may be divided into three categories:

1. The removal or destruction of these forms of malignant tumors in patients today by surgery, radiotherapy, and chemotherapy.
2. The prevention of cancer if research should disclose the nature of causative agents and if we should be able to define methods of prophylaxis on the basis of such discoveries (e. g. vaccines), and
3. The discovery of a simple, inexpensive, rapid diagnostic test which will disclose the presence of cancer anywhere in the body on examination of a small sample of blood.

Citizens' budget recommendation

The budget which I present to you, Mr. Chairman and gentlemen, represents the consensus of a number of informed citizens who are deeply interested in cancer research in this country. Their studies and deliberations were finally put into form for presentation before this committee in a special meeting held by a group of citizens who are all present, or immediate past members of the National Advisory Cancer Council. This represents their unanimous recommendation. These citizens regard the proposed budget as realistic, conservative, and composed of a series of items which can be carefully evaluated and completely justified. It is understood in making this recommendation that the grants appropriation will be allocated to the scientists of the country by the Surgeon General on the advice of the study sections and the National Advisory Cancer Council, and that only such money as can be spent wisely will be recommended by these bodies of citizen experts. It is understood, further, that all requests, no matter what the source, which are not up to the standards of these advisory groups will be rejected.

Research grants

The budgets of the National Cancer Institute for the years from 1954 through 1958, and the President's recommended budget for fiscal 1959, are summarized in table 2. This shows the actual amount of research grants support divided into direct costs and indirect costs. It shows clearly, too, that if the President's recommendation of an increase in overhead from 15 percent to 25 percent were enacted without any increase in the total amount of research grant support, there would be an actual reduction in the amount of money available for research of almost 1½ millions for fiscal 1959, as compared with fiscal 1958. The Citizens' Committee voted unanimously for an increase in research grants as outlined in table 1. The basis for the computations in table 1 are explained on the following page.

May I include, too, a brief discussion of indirect costs (overhead) and the effect upon the grants appropriations as shown in table 2.

TABLE I

RECOMMENDATION FOR RESEARCH GRANTS SUPPORT, FISCAL 1959, BY CITIZENS' COMMITTEE

The Citizens' Committee voted unanimously for an increase in research grants to be computed as follows:

1. Fiscal 1958 figure, plus an increase to 25 percent in indirect costs (total of $22,890,250—direct costs $18,312,200, and overhead $4,578,050).

Plus an increase of 8 percent to adjust for increase in salaries and cost of supplies since fiscal 1958 (total of $24,721,470).

Plus 30 percent of this total figure for new money for research grants ($7,416,441), plus 25 percent of this increase $1,854,110, making the total $33,-992,020.

2. If it should be determined that the overhead figure is 35 percent the following citizens' recommendation would be made:

Fiscal 1958 figure, plus an increase of 35 percent in indirect costs (total of $24,721,470—direct costs $18,312,200, overhead $6,409,270).

Plus an increase of 8 percent to adjust for increase in salaries and cost of supplies since fiscal 1958 (total $26,699,187).

Plus 30 percent of this total figure for new money for research grants ($8,009,756, plus 35 percent of this increase $2,803,414, making the total of $37,512,357).

National Cancer Institute budget obligations by activity, 1958 and 1959

	President's budget, 1958	President's budget, 1959	Citizens' recommendations, 1959	
			At 25 percent	At 35 percent
Grants:				
Research projects	$21,059,000	$21,059,000	$33,992,021	$37,512,357
Research fellowships	1,027,000	1,027,000	1,427,000	1,427,000
Training	4,550,000	4,550,000	6,050,000	6,050,000
State control programs	2,250,000	2,250,000	2,250,000	2,250,000
Field investigations	1,900,000	1,900,000	2,400,000	2,400,000
Direct operations:				
Intramural research	9,360,000	9,435,000	9,860,000	9,860,000
Review and approval of grants	562,000	528,000	596,000	596,000
Professional and technical assistance	2,724,000	2,644,000	2,724,000	2,724,000
Administrative increase	165,000	165,000	215,000	215,000
Chemotherapy contracts	12,340,000	12,365,000	19,365,000	19,365,000
Increase in administrative costs for chemotherapy contracts and center activities			750,000	750,000
Special program: Development of chemical and diagnostic tests			1,500,000	1,500,000
Total obligations	55,937,000	55,923,000	81,129,021	84,649,357

Table II

Discussion of Indirect Costs (Overhead) and Effect Upon the Appropriations

In fiscal year 1958 the total actual appropriations for the NCI for research grants was $21,059,000.

(*a*) Within indirect costs at 15 percent ($2,746,800), the amount left for research direct costs was $18,312,200.

(*b*) If the overhead had been 25 percent with the same total, there would have been only $16,847,200 for research direct costs.

(*c*) If the overhead had been 35 percent, with the same total, there would have been only $15,599,300 for research direct costs.

The President's budget for fiscal 1959 gives no increase in research grants over fiscal 1958, but there is a recommendation for 25 percent indirect costs. Calculation shows:

(*a*) Research direct costs are now reduced from $18,312,200 (1958 figure) to $16,847,200 with $4,211,800 for indirect costs.

If the President's budget for fiscal year 1958 had given a recommendation of 35 percent overhead, with no increase in the total amount for research grants, the total sum available for direct research costs would have been $15,599,300, and the indirect cost $5,459,700.

(*b*) If it had been desired in the President's budget to maintain the same level of research direct costs as in fiscal 1958, the total sum appropriated in view of the President's desire to increase direct costs from 15 to 25 percent should have been $22,890,250 (consisting of $18,312,200 for direct costs and $4,578,050 for indirect costs).

Research grants, showing indirect costs (15 percent overhead)

	Total actual	Direct costs	Indirect costs
1954	$7,366,603	$6,405,742	$960,861
1955	8,159,924	7,095,586	1,064,338
1956	9,282,965	8,072,143	1,210,822
1957	18,703,427	16,263,849	2,439,578
1958	21,059,000	18,312,200	2,746,800
1959 President's budget specifies 25 percent overhead	21,059,000	16,847,200	4,211,800
If President's 1959 budget had authorized 35 percent there would be	21,059,000	15,599,300	5,459,700

Research fellowships

One of the most valuable aspects of the National Cancer Institute program concerns research fellowships. The Citizens' Committee recommends an increase of $400,000 over fiscal 1958 appropriation, or a total of $1,427,000.

Training grants for research in cancer

This committee emphasized repeatedly the great importance of training research workers in the several areas concerned in the National Institutes of Health. The training grants for research in cancer have been wisely administered, and are achieving their purpose. It was calculated by the Citizens' Committee that an increase of $1,500,000 to a total of $6,050,000 is required to provide the pool of trained scientists to implement the cancer research programs.

State control programs; field investigations

No change is recommended for the State control programs, which are believed to be working effectively at the present level.

In the area of field investigations an increase of $500,000 is recommended, specifically for the training of cytologists to carry out the Papanicolaou test, for the expansion of field investigations concerned with cancer control, and for the development of modifications and improvements of the diagnostic tests of the cytologic type presently employed. Experts in this field, in discussion with the Citizens' Committee, have justified this recommendation.

Direct operations

The intramural research program of the National Cancer Institute has received the respect and approbation of the scientists of the country, because of the caliber of its many fine research programs, and because of the necessity for maintaining the National Cancer Institute as a truly great center of cancer research. The Citizens' Committee does not believe that any important expansion should be recommended for the National Cancer Institute intramural program in Bethesda. The committee felt, however, that important leads uncovered there, particularly in the field of filterable viruses concerned with the possible causation of cancer, should be followed as rapidly as possible. To this end the Citizens' Committee recommends an additional $500,000 to be added to the budget for intramural research, increasing fiscal 1958 item of $9,360,000 to fiscal 1959 recommendation of $9,860,000. This area of research, as my colleague Dr. Wendell Stanley brings out in his testimony, today, may be described as exciting and demanding of rapid expansion. I should like to repeat my suggestion made elsewhere in this testimony, that any sizable or important expansion of the role of the National Cancer Institute in cancer research will logically be found in a relationship of the National Cancer Institute programs to the expansion of research throughout the country. Before leaving the intramural program of the National Cancer Institute, I want to once more speak of my great pride as a citizen in the existence and development of the magnificent clinical center and the other research institutes of the National Institutes of Health in Bethesda.

In the field of review and approval of grants, an increase of $34,000 appears to be a fair increase, in view of the expansion of the grants program. In addition, increase of $50,000 to help care for the increased administrative costs in running a much larger program, has received the approval of the committee. No increase in technical assistance is recommended.

Cancer chemotherapy program

The largest single program of the National Cancer Institute, that concerned with chemotherapy of cancer, was inaugurated through the interest of this committee and the action of the Congress. Dr. Raydin has spoken of the progress in this area. The search for chemical agents, antibiotics, hormones, or natural substances capable of destroying widespread cancer, without harming the patient, represents the most promising direction of research to the patient who has disseminated cancer today on the basis of present knowledge. In previous years our testimony has taken up in detail the requirements for progress in this field, the probability of achievement of goals, the nature of the vast amount of work required for the achievement of progress, and the promise for the future. No better example can be given of what can be accomplished through the National Institutes of Health by means of cooperative voluntary programs which permit both academic freedom, as well as the conduct of planned research, than this cancer chemotherapy national program, under the immediate leadership of Dr. Kenneth Endicott and the Director of the National Cancer Institute, Dr. J. R. Heller. The devoted unselfish efforts of large numbers of citizen advisers, joined with the earnest

activities of a dedicated administrative staff, have written a heartwarming chapter in the history of cancer research. The enormity of the undertaking has not been underestimated. This gigantic progam, sponsored by the Congress could not have made the progress of the last few years without the fundamental discoveries of a small number of research workers and institutes in this field whose pioneer efforts took place prior to the inauguration of this program. It should be mentioned, too, that it has been possible by mobilizing the scientific resources of this country in the academic institutions, and in the laboratories of industry, to accomplish in 4 years what it would have taken the few scientific institutions working alone, many more years to accomplish in the exploitation of their own discoveries.

The Citizens' Committee recommends an increase of approximately $4 million in the chemotherapy research program. This much we feel certain will be needed if we are to give proper support to those scientists who have programs which are worthy of support. In addition the Citizens' Committee unanimously recommends an increase of $7 million to total $19,365,000 for contracts with industry and with academic and research institutions of the country. I should like to record the statement that as chairman of the committee on chemotherapy of the National Advisory Cancer Council concerned also with the recommendation of contract awards to the National Cancer Institute, and to the Surgeon General, this contract mechanism with industry represents one of the greatest forward steps in the history of cancer research in this country. Industry has risen nobly to the challenge. They have not only accelerated greatly their own research programs in cancer chemotherapy by means of contract support through the National Cancer Institute, but they have provided millions of their own money above our contracts in response to this stimulus. The laboratories of industry possess chemicals, hormone analogues, and antibiotics which form a vital treasure in our search for the ultimate chemotherapeutic cures for cancer. Only industry can supply the antibiotics which are required, and only industry is possessed of the vast experience, knowledge and resources for the production of chemicals, hormone analogues, and antibiotics on the scale we require.

The citizens' committee believes that an addition of $7 million to the contract program for both industry and other institutions represents not only a wise expenditure of public funds, but also a necessity at this time, if the cancer chemotherapy program is not to founder. I am aware, Mr. Chairman and gentlemen, that those who are not so intimately concerned with this program have suggested that this and other programs be held at the 1958 level during a period of what is called evaluation. Those who are expert in this field, however, believe firmly that this is not the time to stand still. Any interference with the nature and proper growth of the cancer chemotherapy program at this time would not only prevent the continuation of hard earned progress but would be responsible for backsliding of the program down the steep incline which we have been climbing with so much effort and such measurable success. We recommend in addition, an increase in administrative cost for the cancer chemotherapy center, a separate item of $750,000. I speak with particular feeling about this recommendation. The size of the program and enormity of the details concerned in its successful prosecution demand an increase and better provision for the splendid staff Dr. Endicott has assembled.

A new special program—Chemical and hormonal and cancer diagnostic tests

The great success of the cancer chemotherapy national program, under the sponsorship of the Congress, has made it clearer to those of us immediately concerned with the development of cancer research in this country, that voluntary coordinated efforts, administered through the National Cancer Institute could be productive of great acceleration of progress in a few other fields of cancer research. I, would recommend such a voluntary cooperative program in the field of virus relationship to the causation of cancer, and the possible production of vaccines or other means of preventing the occurrence of cancer. Another area which would lend itself superbly to the support of a voluntary cooperative program, concerns the area of chemical and hormonal and cancer diagnostic tests. The Citizens' Committee recommends a line item in the budget of $1,500,000 to inaugurate such a program.

There are two parts to this suggestion. The first concerns the pressing need for methods which will permit us to determine the level of chemical enzyme systems, and of hormones in the body of the normal individual, as well as in the patient with cancer and the patient with cancer who is receiving treatment by hormones, chemicals, or antibiotics. These methods are not available today. Such information is urgently needed by the physician who evaluates and treats patients with cancer. This is all the more true because of the great gains in the

field of chemotherapy and the hormonal treatment of certain forms of cancer, such as the breast, or the prostate. Such methods may be developed by scientists working alone. There is no question that progress in this exceedingly difficult field will be far greater if scientists, while retaining their academic freedom, work in a cooperative manner in constant communication with one another through an administrative group in the National Cancer Institute.

The second area we have in mind concerns the grave need for a simple, inexpensive, rapid diagnostic test for the presence of cancer somewhere in the body which can be performed on a small sample of blood. What is needed is a method so simple that it can be performed on a scale comparable to the mass X-ray screening of the lungs of the population for tuberculosis. We should be able to tell not only whether cancer is present in a person who appears to be otherwise normal, but whether cancer has returned in a patient from whom the tumor had been removed by surgery, or destroyed by radiotherapy or chemotherapy. Such a test will be all the more needed as progress in the chemotherapy of cancer increases, so that we may use it for a guide for the choice of chemical agent and the time and duration for its administration to the patient. A number of important advances in this field have been reported within the last 15 years. Unfortunately there is still not available a test so reliable, and so consistent that it may be put into mass use for the benefit of our people. We request, therefore, that the interest of the Congress be expressed in this very important area by the creation of a voluntary coordinated progress of research. If the availability of such research support could be brought to the attention of the scientists and physicians whose knowledge, past experience, and talents might be brought to bear upon the question, and if industry could put its experience and resources to the task by means of the contract mechanism, I feel certain that progress in this field literally would be catapulted. The suggestion of $1½ million for the first year is an estimate merely of the amount required to get this program underway. Further recommendations would depend upon progress and the promise of greater activity.

World cancer program (chemotherapy and epidemiology)

Mr. Chairman and members of the committee, I ask your permission to speak briefly concerning a recommendation for the inauguration of what I will term a world cancer chemotherapy and epidemiology program. I know of the deep concern of the chairman of this committee for the development of research relationships with other countries of the world, and what I have to say is in accord with this philosophy. Reference may be made to the state of the Union message of the President in January of this year, concerning a "deeds for peace" program with Russia, consisting of cooperative studies in cancer, malaria, and heart disease. Since medicine is a world problem, cooperative programs with other countries should bring in all countries in the world with common problems. I should like to speak in favor of a program in the field of cancer which could be implemented without delay since the machinery required would be but an expansion of that which already exists. I refer to the Cancer Chemotherapy National Service Center and to the Epidemiology Division of the National Cancer Institute. A world program of this kind could mark the forerunner of world programs in a number of other medical research fields. Ideally it should consist of three parts:

1. The provision of anticancer chemicals, hormone analogues and antibiotics which we are employing at this moment in the treatment of human beings with disseminated cancer in this country. These should be furnished to research centers in all countries in the world. I can think of no more significant humanitarian act on our part than the furnishing of treatments which will at least be of temporary value to the patients of countries where such materials are not available.

2. The provision of funds through research contracts with research workers and institutes in all countries of the world. We may recall that about one-third of the anticancer chemicals and hormone analogues now in use have come from countries outside of the United States, notably England, France, Germany, and Japan. Antibiotics against cancer are produced in greater number in Japan than any other country in the world, except the United States. If the same strict standards governing the award of research contracts which now obtain in the United States could be extended to the investigation and support of chemotherapy research by contract in all countries of the world conducting such research, we may with all logic anticipate acceleration of progress in this field, not only in the various countries of the world but also for the benefit of our own people.

3. Provision of support for research in the epidemiology of cancer. This concerns the study of the nature and occurrence of the various forms of cancer in the

different countries of the world. Programs could be set up in countries where they have forms of cancer in large numbers which we have in smaller numbers in the United States. An example which may be cited is the occurrence of cancer of the bladder in the Near East in association with a parasite found in the bladder-schistosoma hematobium. More intensive study of this form of bladder cancer in the Near East would enable us to make more rapid progress against the smaller numbers of instances of bladder cancer in this country. This form of cancer is one of the most miserably painful, slowly developing forms of malignant tumor with which we are faced.

The amount of money required to inaugurate such a program can be arbitrarily set for the first year until the full implementation is possible. It is my earnest hope that his suggestion will receive action by the Congress this year. This country has always shared with the world the knowledge gained in our research programs. This recommendation would carry the sharing of knowlege to logical practical application, by making available the material as well as the theoretical results of our research to the various research centers of the world and by establishing cooperative research programs for the benefit of all.

General Statement

Senator Hill. Proceed now in your own way, sir.

Dr. Farber. May I express my appreciation once more for being permitted to appear before you, Mr. Chairman and members of the committee. I feel that it is almost unnecessary to give scientific testimony before this committee except to bring you up to date on what has happened since last year.

I note that in my prepared testimony I paid so much attention to defending something which the citizens have recommended in the form of a budget that I have neglected to give some of the details which I shall now fill in as I go along.

Senator Hill. Good.

CONGRESSIONAL SUPPORT OF NATIONAL INSTITUTES OF HEALTH

Dr. Farber. I do want to remind this committee of the part that it has played in the increased support of research through the National Institutes of Health. I would like to point and repeat what I have stated before in other places that the Congress has shown great wisdom in its action on research budgets. This is in great measure a result of the recommendations of this committee and the committee of Congressman Fogarty in the House which has urged increased support for research and for hospital and laboratory construction and now hopefully will aid in medical school construction for the training of hundreds and thousands of scientists and doctors throughout the country in what is regarded as splendidly conceived research training programs.

The efforts of the voluntary health agencies and private institutions begin to have some meaning now. Without these efforts of the Congress I think there would have been no really measurable progress in research since the end of World War II.

GENERAL RESEARCH GRANTS

May I refer to the testimony which was presented before this committee this morning by a group of three splendid young men with whom I have had the pleasure of conferring in preparation for their testimony.

Before Mr. Fogarty's committee I made the recommendation which they presented to you this morning for an increase in the general

research grants and general research training grants of sums of money which I would like to specify once more. For research training grants in this general area, an increase from $9.5 million to $20 million; and for general research training grants an increase from $2.5 million to $10 million.

With these splendid scientists who testified before you this morning I had the opportunity to investigate thoroughly the need for support in these two areas. I would like to give very vigorous support to their recommendations.

I would like to say further that without greater progress in this so-called basic area and in the areas of research in the noncategorical areas in the disciplines of medicine and surgery, pediatrics, pharmacology, and biochemistry and a good many other disciplines, there can be no real progress in these areas which have much more direct goals and direct appeals such as cancer and heart disease and the like.

ADMINISTRATION OF GRANTS PROGRAM

I would like to say just a word in passing about the administration of the research grant program in the National Institutes of Health and to tell you once more of the great appreciation of the scientists and the physicians of the country in the fairness and in the great efficiency with which that program is conducted under the splendid leaders in the National Institutes of Health.

A little later I should like to return to the question which my colleague, Dr. Stanley, touched on and one of the questions Senator They asked about in regard to research grants and the manner in which some of these grants may be given.

The project grant I have likened to the DC–3, which proved to be a tried and true workhorse and still is. This we must retain no matter what happens. But in addition to this project grant we must go far beyond and work out new methods which will bring support to the research institutions of the country of the same kind that is given to the National Institutes of Health.

I think we must face this in the field of research and regard the great expansion of the future of the National Institutes of Health's effectiveness to be through those Institutes, not entirely in those Institutes. Great expansion should take place in institutions in various parts of the country. This expansion should be based entirely upon merit and the ability of institutions to carry out research, and their willingness to accept great challenges with the aid of Federal support.

NEED FOR SUPPORT OF PRIVATE COLLEGES

I have stated that the time has come to put on a strong and economically sound basis the programs of research in private colleges, universities, medical schools, and research institutions in the many parts of the country which possess the proper environment, the leadership, and the invaluable traditions of academic achievement.

I should like to add one word, too, with my colleagues Dr. Ravdin and Dr. Stanley, in support of the full cost of research, the total cost of research, or the realistic evaluation of indirect costs.

I would, perhaps, go one step further than Dr. Stanley did in saying that we are encountering in many parts of the country, a very

definite resistance on the part of administrators and those responsible for hospital and medical school deficits who feel that they cannot accept more research funds without endangering their already gravely endangered economy.

This can be handled only by a realistic payment of indirect costs. We must face this or say that we cannot use the funds which we are asking this committee to appropriate.

BUDGET FOR NATIONAL CANCER INSTITUTE

May I now come to the budget of the National Cancer Institute, a study by a group of citizens, most of whom happen to be members of the National Advisory Cancer Council at the present time and a few of whom have been on that council recently.

We have met, investigated the needs of the country as a whole and the needs of the National Cancer Institute itself.

The budget which I should like to propose for your consideration in their name is one which was reached by unanimous agreement of this group of very deeply interested citizens.

There are a number of programs of cancer research which have not been mentioned so far today in the fields of epidemiology and nutrition, the fields of endocrinological control of a number of organs in the body.

One field of research, for example, of great importance at the present time and in the immediate future with practical application, I believe of great importance to the patient, is concerned with the internal control of those mechanisms responsible for cancers in the so-called target organs, the breast, the ovaries, the prostate, and the adrenal gland.

There are very important studies which are being supported through National Cancer Institute in the field of radiobiology. Enough consideration has been given that, in testimony from other councils and from other groups of citizens, and I shall not go into this further.

GOALS OF CANCER RESEARCH

It is quite probable that the goals of cancer research will be achieved eventually by more than one route. There are three immediate goals of cancer research which I would like to mention.

PATIENT CARE

The first concern is the care of the patient. What we desire there is the removal or destruction of those forms of malignant tumors in patients before us by the use of surgical techniques, radiotherapy, and today chemotherapy, which I want to say plays as much a part in the good care of the patient as surgery or radiotherapy.

CHEMOTHERAPY

By that, I want to emphasize that we have reached a stage in the chemotherapy of cancer when we are no longer talking about something that is way off in the future. There are agents which can be bought today by those physicians and surgeons who are skilled in their use. These chemicals are available and are being used as part of the total care of the patient with cancer.

CANCER PREVENTION

The second goal is the prevention of cancer. If research should disclose the nature of the causative agent as referred to by Dr. Stanley, and if we should be able to find methods of prophylaxis on the basis of such discovery, the development of a vaccine would be important.

I have put in two "ifs" here in regard to this goal and I should like to refer just briefly to what Dr. Stanley has told you.

He has referred to various bits of evidence that he has collected as straws in the wind.

As I listened to him talk, it occurred to me that these straws in the wind were cemented together by a lifetime of experience of a great scientist and that they are clothed with judgment and integrity of a scientist. So we have a form which is now beginning to take a recognition and shape and it awaits only the breath of life, I should say, of some real large-scaled research by a number of scientists who are prepared to do this, who are already here, and who are no longer so badly needed in the field of infectious disease.

The same techniques can be employed here without great loss of time. The scientific resources are here. I would say that if a scientist of Dr. Stanley's stature tells us that he believes that we should move ahead very rapidly in this direction, we have no choice except to move in that direction.

I place this before you as the judgment of a man who is responsible for a large research program in cancer, as I am. This is one of the areas that we ourselves are developing with the aid of experts in virology in this field.

I think that all you can do in addition to endorsing what Dr. Stanley placed before you so clearly, is to request that premature enthusiasms should be restrained until knowledge and experience should predict what the future will give. After the discovery, let us then rejoice, and not before.

SIMPLE DIAGNOSTIC TESTS

The third great goal concerns the discovery of a simple, inexpensive diagnostic test for cancer which can be done rapidly and easily on a large scale to disclose the presence of cancer in the body on the basis of examination of a small amount of blood.

This has been a goal for a great many years. We have been quite near it a number of times, but to the best of my knowledge, we still have no simple, accurate diagnostic test. Such a test is badly needed, not only to determine the presence of cancer in a person who is assumed to be otherwise quite normal, but to find out whether cancer has returned in early form, in early stages, after the surgery has removed it, the radiation killed it, or the chemotherapy retarded its growth.

CITIZEN'S COMMITTEE RECOMMENDATION

The citizen's budgetary recommendation which I should like to present to you, Mr. Chairman and members of the committee, begins with research grants, and in tables I and II we have a series of budgetary items.

I would like to make reference to the President's budget recommending an increase in overhead from 15 to 25 percent with no increase in the total amount of money in the research-grant area; this would result in an actual reduction in the amount of money for cancer research, $1½ million for fiscal 1959 as compared with fiscal 1958.

NEED OF LARGE INCREASE

I want to speak again in favor of that increase from 15 to 25 percent because, certainly, I do not believe that we can consider for a moment the reduction in the amount of support for research. We are talking in terms of a very important increase.

Senator THYE. Doctor, while you were turning those pages to find the next table—if I may, Mr. Chairman—have you ever had a cancer lesion or a cancer condition in the heart?

HEART CANCERS

Dr. FARBER. Yes, indeed. There are tumors which begin in the heart, as there are tumors which begin in the brain or the prostate or the ovary or the breast. These are rare.

There are several kinds of cancer which begin in the heart. There are a far greater number of cancers which begin elsewhere and then spread to the heart. Just about 10 days ago we lost a child, a boy of 9, with acute leukemia at a time when I did not expect that his disease, his cancer, was widespread enough to cause death. He died quite suddenly while lying in bed.

It was found that there was a spread of the leukemic tumor to the heart muscle in a number of areas, so that what he died from was precisely what a patient with a coronary disease might die from, and that is cardiac insufficiency.

There are a great many tumors that may metastasize to the heart, but that is not one of the most common sites of cancer in the body.

Does that answer your question?

Senator THYE. Thank you, sir; it does.

ITEMS RECOMMENDED

Dr. FARBER. Now, we have followed the various budgetary items, and I am not going to say anything about research fellowships or the training grants for cancer research, except to say that we are unanimous in our opinion that these are important areas of expenditure; that we have recommended an increase in these areas which has been very carefully calculated on the basis of the need for people and the pool of scientists who can use these.

We believe that every penny recommended in these areas can be very wisely spent and effectively used. We are recommending no change in the amount of money for the State control programs in cancer because we have learned that that money available now is adequate for the needs in this area.

Field investigations take in the Papanicolaou studies for the diagnosis of certain kinds of cancer, notably that of the uterus and certain other parts of the body. An additional half million dollars is recommended for these grants based on expert opinion in this field.

This amount is for the development, for modification and improvements of this kind of diagnostic tests. I think that everyone is agreed that the great work originated by Papanicolaou at Cornell in New York must be continued; that we must have modification and perfections of the technique. Certainly, a great many lives have been saved because of this discovery.

OPERATIONS AT NIH

Now, on the direct operations of the National Cancer Institute, the committee gave great thought to a review of the programs. I want to record again here the high opinion that those of us outside of the National Cancer Institute have of the intramural programs, and the appreciation we have for the high quality of the research now being carried out there.

We are delighted that a new visiting committee has been appointed under the chairmanship of Dr. Stanley, and that the outside world and the inside world are brought much closer together than was ever possible before.

The citizens committee does not believe that any important expansion should be recommended for the National Cancer Institute in the intramural program in Bethesda, but we do believe that one of the most important leads they have uncovered, that concerned with the possible role of viruses and the causation of cancer, should be developed as rapidly as possible.

Investigation of their needs shows an additional half million should be added to the budget for the intramural research in this area, which would be wisely spent. I think this would meet our unanimous approval.

The report outlines other very minor recommendations for an increase for the administration of the National Cancer Institute, and I shall not develop this any further at this time.

CANCER CHEMOTHERAPY

May I return to the cancer chemotherapy program and say here that, if a surgeon of Dr. Ravdin's distinction tells us that this area of chemotherapy is an important one to develop so that the number of cures in cancer produced by surgery alone, surgery and radiotherapy, may be greatly increased, then I think it is mandatory, too, that we move ahead in this direction.

I would like to make 1 or 2 comments about the state of our chemotherapy program. You know this program began in this committee and under the splendid direction of Dr. Kenneth Endicott and his chief, the Director of the National Cancer Institute, Dr. J. R. Heller.

This program has gone along splendidly during this past year. At the present time, they are studying chemical compounds and antibiotics in experimental test systems at a rate of about 40,000 per year. Thirty thousand of these forty thousand materials come from industry in the form of antibiotic beers. This is one of the most promising areas in chemotherapy cancer, and one that is being pursued very diligently.

These materials are studied not only in the transplanted tumors in the mouse—and the size of these programs with mice are now tremen-

dous—but they are studied also in bacterial test systems and in tissue culture, using a technique developed by Dr. Harry Eagle, of the National Institutes of Health. This is a modification of the kind of tissue-culture work to which Dr. Stanley referred. We are now growing at least 60 different forms of human cancer in bottles under experimental conditions.

We are able to add the chemicals in minute amounts to these bottles and determine whether there is an anticell effect.

Work is proceeding so vigorously at the present time that we are in hopes that the tissue culture methods may, in time, take the place of animal testing systems and so permit us to go on very much more rapidly.

GROWING HUMAN CANCER TISSUE

We are also growing more than 60 forms of human cancer in the cheek pouch of the hamster and in the rat and in other small laboratory animals as in the Sloan-Kettering programs. These are being used in an attempt to find out more rapidly just which chemical compounds, hormones, and antibiotics may be most useful in the treatment of human cancer.

Dr. Ravdin has carried you through the rest of the program into the large-scale evaluation of these chemical compounds against many forms of cancer in man. Without the kind of study which Dr. Ravdin is heading up, we could not arrive quickly at the conclusions which are so badly needed.

I do want to repeat again that the chemicals and hormones and antibiotics against cancer are being used in many hospitals in the care of patients with cancer that cannot be cured by surgery and X-ray.

In my own experience I can look back now on 11 years to the beginning of a program of cancer chemotherapy.

We care for the patient for the duration of his life. Once we take the patient, we continue until the very end. We have taken care of large numbers of patients with so-called incurable cancer in the 11 years past, using chemicals and antibiotics and hormones as part of the total care of these patients. About 70 percent of these were children.

We are taking care of some 400 patients with widespread incurable cancer at the present time with the aid of these compounds.

PROGRESS IN TREATING ACUTE LEUKEMIA

When I spoke to you a year go, Mr. Chairman and members of the committee, I said that the survival in acute leukemia in children, which had been a few weeks to a few months just 10 years ago, had reached the stage that 50 percent were still alive at 14 months and 10 percent were still alive at 2½ years.

I am happy to tell you that there has been a gain, and the 10 percent survival period is 32 months. These months were hard-won months.

Why should one fight for 2 more months of life? I think the the answer is in the kind of research that you hear about today every year, every week, and every day, which is of importance.

I think the only optimism one may have as a parent or a member of a family of a patient with cancer, is that life may be maintained. The next step from the laboratory may mean life for this patient. That is why the 2 months are of tremendous importance.

SPECIFIC CASE OF TREATMENT OF RETINOBLASTOMA

I could tell you about a boy of 10 years of age who came to us in September with a tumor of his eye destroying the eye on one side, arising from the eye muscle. The tumor could not be removed surgically, because it had grown too far. It is a kind of sarcoma which I have talked about before which does not respond to radiotherapy. But, when a small amount of antibiotic was given intravenously to that boy and a small amount of radiotherapy, that tumor disappeared within the course of the next 4 weeks and it is still gone. We know it is not cured.

Senator HILL. It is not active?

Dr. FARBER. We cannot see any evidence of the tumor.

We are working out a second line of therapy now in an attempt to see if we can affect any spread of that tumor to other parts of the body.

Senator THYE. Doctor, has it destroyed the eye?

Dr. FARBER. It had destroyed the eye before we saw him.

Senator HILL. Is the other eye normal?

Dr. FARBER. The other eye is good. This is retinoblastoma, which involves the eye. Beautiful work on this disease has been carried out in New York City at the Columbia University Medical School.

It was found out a few years ago—and this work is still being continued—that a small amount of triethylenephosphamide used with radiotherapy could save the eye and kill the tumor.

This is a very heart-warming performance on the part of those scientists and doctors at Columbia University.

MALIGNANT MELANOMA

I could give you another example of a man I saw the other day who came to us 2 years ago with malignant melanoma, black cancer, which was spreading rapidly over his entire body.

We have no method of treating that curatively. It does not respond to radiotherapy, and we cannot cut it all out, but with one of these chemicals, triethylenephosphamide, this tumor has progressed slowly until it has been completely arrested. This man has not lost a day from his employment for 2 years.

Senator HILL. He has been going to work every day?

Dr. FARBER. It is a very important responsible position in Boston, and he has discharged his duties beautifully.

This is the kind of state we are in now in every good center in the country.

Dr. Ravdin has had a great number of experiences which are of the same order of magnitude as those which I have described.

Now, this is the field of cancer chemotherapy. I have given you examples from the clinical side and the more empirical side, but if we get to the basic biochemical approach to search for chemical substance, we arrive, as Dr. Stanley has pointed out, at exactly the same point in chemistry and we use exactly the same terms as those he employs in his discussion of viruses.

I think that it is a beautiful illustration of how a scientist beginning at one end and a scientist beginning at the other come together in an attempt to conquer a problem which seems to be incurable.

Senator HILL. Senator Stennis had to take a telephone call. Would you state again about the gentleman you told us about?

Dr. FARBER. You mean the man with black cancer?

Senator HILL. That is right.

Dr. FARBER. I talked about a man who had a black cancer spreading widely over his skin and all over his body. It is a tumor which is not radiosensitive. If it is widespread, you cannot cut it out. But in 1951 we tried triethylenephosphamide, a compound which had been discovered in the Lederle Laboratories in the study for its effect against leukemia.

At that time, it did cause temporary disappearance for about a year and a half of such a tumor. We have tried triethylenephosphamide on a great many patients since that time.

In this particular instance, the tumor was arrested. It has not grown any further. He has been able to work without interruption, in good health, for these 2 years. He has been alive about a year and a half longer than he would reasonably have expected.

Senator STENNIS. That is wonderful.

INCREASE RECOMMENDED FOR CHEMOTHERAPHY

Dr. FARBER. We have recommended as a citizen's committee an increase of $4 million in the chemotherapy research program and $4 million in the area that is not concerned with chemotherapy. This is in the grants division of the program.

FUNDS FOR CONTRACTS WITH INDUSTRY

But in addition we have unanimously recommended an increase of $7 million to a total of $19,365,000, for chemotherapy contracts with industry, academic institutions, and research institutes.

This contract mechanism has been a tremendous boon to us. Properly handled through the usual governmental checks and controls and on the recommendation of a committee of current and past members of the National Advisory Cancer Council, these contracts are awarded to industry and to certain academic and research institutions for the research which is just beyond the mechanism of the project grant.

It has been heartwarming to see the response of industry to this program. They have resources and knowledge and manpower which we badly need. They have the chemicals. They are the only source of large quantities of antibiotics and chemicals.

All of these 30,000 antibiotic beers that we are studying here at this time come from industry.

So with those industries we now have in the program we are making very rapid progress indeed.

There are a number of other industrial laboratories which we believe will join us in this national endeavor. For that reason, for expansion of this very vital portion of our program, we recommend this addition of $7 million.

I do know that it has been stated by those who are not near this program that we ought to stop at the level we are now and take stock for the next year or two. I do not believe that we have worked up a sweat yet in this work that we are doing which would permit us the luxury to stop. If we stopped at this point, we would just slide back.

We have this wonderful momentum worked up within industry, and this great cooperation that has been handled so effectively through the chemotherapy center in Bethesda that we truly hope that we will be able to expand this at its very logical level.

NEW PROGRAM OF COOPERATIVE EFFORT

There is a new program that we would like to recommend. It is possible to talk about a number of different programs in cancer research that might be carried out in the fashion comparable to that which has proved its effectiveness in this cancer chemotherapy national program.

I think these should be worked out with great care and presented to you with proper documentation, and we intend to do that next year in more than one area.

But there is one that I would like to mention now and that concerns the bringing together of scientists and academic institutions and industries in the country in a voluntary and cooperative effort to solve two kinds of diagnostic problems.

STUDY OF HORMONAL PATTERN

The first concern is the hormonal pattern, the hormone pattern of the normal person. What is the blueprint of my own body economy at the present time in terms of hormones? We have no simple diagnostic methods which will enable us to give an assessment of a normal individual from age to age. This is badly needed.

It is even more badly needed in the case of the patient with cancer of the breast or prostate or adrenal gland or some other form of cancer.

So that we may guide ourselves in the correct form of treatment which we employ, this is important.

We now have available potentially about 5,000 invaluable analogs of hormones made by industry. It would be impossible to use those intelligently and effectively in preventing spread of early cancer or taking care of late cancer, unless we have this kind of precise biochemical information.

COOPERATION IN DIAGNOSTIC TESTS

The second part of this recommendation is that which concerns the voluntary cooperative program in the field of cancer diagnostic tests using small samples of blood. I cannot overemphasize the importance of this.

This is obvious to all of us, lay people, and scientists alike.

I believe firmly that if we create the proper climate through the National Cancer Institute and have funds available for this and a very effective administrative force in the National Cancer Institute, we are bound to make very much more rapid progress by pooling the knowledge of scientists today than by individual effort alone.

This is the field, may I remind you, in which a scientist is loath to enter because there is no exit in sight, and if a man devotes his scientific life and reputation for research for cancer diagnostic tests with no hope himself of finding it, he may destroy his chances for scientific achievement, his recognition, or his ability for earning a living.

There are areas in which many are not willing to enter and only a few who are tremendously devoted will go into a field such as this.

I respectfully call this to your attention with special consideration this year and hope that this kind of program can be mounted without much delay. I think this is an opportunity for this committee to make a great contribution to cancer research.

This concludes the consideration of the budget as such.

With your permission, Mr. Chairman, I would like to make final mention of something which is outside the National Cancer Institute but which has to do with it. I know of the deep feeling of the chairman and of the members of this committee in the area of great concern to all of us, the cooperation of research workers in many countries of the world.

WORLD COOPERATION OF SCIENTISTS

The President in his deeds-for-epace speech, made reference to Russia alone. I think all of us would agree that this is a splendid suggestion, but that it would be very much more effective if scientists and physicians the world over would cooperate rather than to have the cooperative research program with any single country in the world.

To me as a physician, it would be offensive to restrain my efforts, restrict them, to consideration with any one country in the world.

Senator THYE. Doctor, as a scientist, you look to the scientists of the world, regardless of what country or what nationality they are in?

Dr. FARBER. Of course, Senator.

Senator THYE. Because you, as a scientist and a scientist in India or Pakistan might have something in common though you might not speak the same language. That has been my concern. I have had a feeling that we as a nation have failed from the standpoint of our administrative function in the field of science. I do not believe that we have attracted the scientists of other lands to this Nation, because for some reason or other, we just do not have a close enough relationship with them. That is my feeling.

You may not as a scientist, but I mean the State Department, I mean the governmental body as such. If I am wrong, I want to stand corrected. I have tried to encourage that development of a closer relationship between our State Department and the scientists of foreign countries. Am I right or wrong? You are scientists and I am trying to get myself informed on this question.

Dr. FARBER. Science and medicine are universal. Medical disease, misery, pain, and suffering are universal. If we combine the problems of the patient the world over and the point of view of the scientist and of his thirst for knowledge, there can be no boundary lines.

Senator THYE. Would there be any objectives gained by having a scientists' exchange, in order to get a closer relationship between this land and the scientists in other countries?

VALUE OF INTERNATIONAL MEETINGS

Dr. FARBER. We are doing this constantly to the full extent of our resources.

Two years ago in Oslo we had the first cancer chemotherapy international meeting with 30 representatives of various countries in the

world. I was very pleased to see for the first time representatives from Russia who compared their findings with our findings.

Next summer in London there will be the International Cancer Congress, the Seventh International Cancer Congress. Two papers summarizing chemotherapy of cancer will be given.

One happens to be from Russia and one happens to come from the United States. There are papers from all countries of the world.

Following that large international cancer meeting, there will be a small one again, a planning committee, with representatives of the many countries of the world, and it is a group of 30, once more, who will meet in Cambridge, England.

A similar group met in Japan last fall.

I think there is no question that we have profited immensely from contributions of science in other countries of the world. There is no question that the world has profited tremendously from what has gone on in this country.

We are taking steps to cement these relationships.

If I choose to speak about cancer chemotherapy, I point out it is just a model system here that is now working. We are trying to have all of the discoveries and all pieces of progress in research in this field communicated as rapidly as we can from one country to another.

This we should perfect.

So my reason for bringing this up today is something which is in your mind, I know, from your public appearances and your writings. It is in the mind of all of us who are interested in research in all fields.

CHEMOTHERAPY PROGRAM AS BASIS OF INTERNATIONAL EXCHANGE

I think we can make a start here. We have a highly developed, beautifully administered cancer chemotherapy national program under Dr. Endicott in the National Cancer Institute.

My suggestion is twofold: First, let us through this agency in cooperation with any other governmental agency and I am not an expert in this field, first of all, make available to every country in the world and to every research center all through the world, all of the chemicals, hormones, and antibiotics that we now have.

I get calls, as Dr. Ravdin does, and all of us in this field, from India, from South Africa, from Japan.

"Here is a patient who is dying of cancer. Do you have anything that we do not have?"

We have a great many things that other countries do not have, and even if they are not curative, if they only arrest the tumor temporarily, it is our duty to see to it that those materials are available for patients in other countries in the world.

I know of no better way of expressing man's interest in his fellow man than in this manner of sharing what we have in the way of treatment of sick and dying human beings.

WORLDWIDE RESEARCH CONTRACTS

As a second part of this suggestion, I would recommend that we give contracts as we give contracts to industry now to research centers in all parts of the world that would like to avail themselves of this opportunity. Wherever there is skill and talent and scientific resource which can give us greater knowledge and hope for progress in

this field, any field of cancer research, we should give grants under the very strict scrutiny of the National Institutes of Health, the exact same kind of examining boards that we use now within this country.

Two things will happen there. We will not only enable these countries to make greater progress with funds from this country, but that progress is going to flow back through these contracts into our research programs, and they will help us to reach our goals more quickly.

QUESTION OF FUNDS

I am not putting in a sum of money except a mythical one of $20 million to this, I cannot measure it. At the present moment, I would suggest if this committee approves it, that a start be made now with any sum of money, and a year from now, I think the appropriate experts in this field should be able to make a report to you which would give you a chance to decide just how much more should be given in this direction.

Senator HILL. Doctor, you spoke about the fact that you were carrying on this international cooperation in this field of research within the limits of your resources. Did you mean by that "resources within the limits of funds available"?

Dr. FARBER. Quite. We have no funds available for this, so it's entirely a matter of personal relationship of one scientist to another, and it is goodwill which is given by exchange of information and exchange of visitors and so on.

Senator HILL. Is there anything you would like to add, Doctor?

Dr. FARBER. I just apologize for having taken so much of your time.

Senator HILL. Do not apologize to us. You have made a tremendous contribution.

Dr. Ravdin, is there anything you would like to add?

Dr. RAVDIN. I subscribe to everything that Dr. Farber has said.

I thought last evening of bringing X-rays that might have interested you, but I thought you might not have an X-ray viewer. These are films of a woman with cancer of the lung.

X-RAY FILMS

The first film was made on the 1st day of April with a very widespread lesion involving nearly the entire left lung. She was started on nitrogen mustard the next day, and on April 27, a look at the X-ray picture will show a nearly completely clear lung.

We would hope that we could repeat that with every patient that we treat with cancer of the lung, but we cannot do that. We must know why it works in one patient and why the same does not work in another.

Senator THYE. You do not have the answer of why the one will react and the other will not?

Dr. RAVDIN. No, we do not.

Certain of the work that Dr. Stanley is doing and men working in that field give us a better insight into those mechanisms that control the life of a cell which may tell us why we are not able to do this.

PROBLEMS OF TREATMENT

Certainly these agents work with rapidity as do certain of the hormones. About 40 percent of the women with mammary cancer that has spread will respond to testosterone, and then after a period there is an escape from this control. Then you might use a female hormone, and then about 40 percent of the remaining patients will respond.

Then, after a time there is complete escape from that.

These are certain of the vaccine problems that concern us in this type of work. So that while the type of thing which I have been heading in a national program is going on, we must have funds for a fundamental research to know about those mechanisms that control what we call the life of the cell.

Senator HILL. Dr. Stanley, is there anything that you would like to add?

Dr. STANLEY. I might add in connection with hormones, that we have beautiful examples of hormone dependent viruses. You can have a situation in which, depending upon the hormone situation in the animal, a virus will either grow or will not grow.

So this ties virology again into the field.

Dr. RAVDIN. The hormone depends upon the tumor.

INTERNATIONAL WORK IN VIROLOGY

Dr. STANLEY. With respect to the international cooperation, we have followed in the virus laboratory over the years that I have been in California, a policy of encouraging this. As a result, about 30 percent of the people who are trained in the virus laboratory come from other countries of the world.

At any one time we will have 8 or 10 different countries represented in the virus laboratory. These individuals bring knowledge to us. They gain knowledge which they take back and start little centers of their own in other countries.

In the new field of virology there are at the present time not enough adequately trained individuals. In order to do our part in the training of individuals, we are establishing, effective July 1 of this year, a department of virology, a teaching department of virology at the University of California in which we shall attempt to provide a training program at the doctorate level, and thereby hope to provide individuals with that type of training.

May I indicate here in connection with the NIH and their desire to augment the program, because I am so close to the work that is going on out there, I know the difficulties that they are encountering in securing adequately trained personnel today in the Cancer Institute for their program in virology. There is a very serious shortage.

Dr. RAVDIN. I would like to say a word.

FINANCING FOREIGN SCIENTISTS

Senator HILL. I might ask one question before we leave Dr. Stanley. I am very much interested, Doctor, when you speak of these people who come to you from foreign countries who work with you there, who bring you knowledge and take back knowledge to their own country.

How are their expenses financed primarily?

Dr. STANLEY. They are mostly financed by their own governments, to a lesser extent by the Rockefeller Foundation. We have just had, during this past year, as a result of the Rockefeller program in Poland, a young Polish scientist. Just before I left Berkeley the other day I had a request from Chumokov, who is director of polio research in the U. S. S. R., to send one of his men to the virus lab.

Senator HILL. Now, Dr. Ravdin.

BERTNER FOUNDATION

Dr. RAVDIN. Thank you very much. I really believe in this program. I should like to briefly tell you the experience I have lived in the last 10 years and the work done by Bertner Foundation. The Bertner Foundation was founded by Dr. Hilton and Catherine Reed. Dr. Hilton's brother was commissioner of education in Germany.

At the end of the war, Dr. Reed, having served in the European theater of operations, raised the question with his brother of whether it might not be useful to send graduates of medical schools to this country for internship.

We have brought in the past 10 years about 365 young German students to this country. They have been put in community hospitals. They were highly selected. They spoke English, read it, and wrote it. They stood very high in their classes.

German medical education is different from our own. This has had a profound influence on German medicine and has let these individuals see the American form of life.

They have seen democracy in action. They have had 2 days each year at Atlantic City in a program of distinguished Americans who have talked about many facets of a democracy.

To show how things like this pay highly, I should like to call your attention to the fact that I have within the last month heard from one of the most distinguished of the German surgeons saying that as a result of these young people coming back and telling how medicine was practiced in our institutions, the medical schools, that he would hope that I would send him one of my young men in surgery to reorganize his department along American lines. That is the first time in history, I think, that has ever happened.

Senator THYE. Dr. Ravdin, there was a time when you turned to the German Government for the advanced technology in surgery. Prior to World War I you most certainly did that.

Dr. RAVDIN. Yes; we did.

Senator HILL. Some went to Germany, Austria, France, and some to England.

Dr. RAVDIN. The greatest of the surgeons was Billroth in Vienna.

Senator HILL. He was also a great violinist.

Dr. RAVDIN. Yes, sir.

Senator HILL. Are there any questions.

Senator STENNIS. Mr. Chairman, I want to ask one question. I want to say first that these gentlemen have spoken with great emphasis and with great earnestness and with great conviction. I wish that all members of our full committee, all Members of the Senate, could have heard them.

The country needs to know more about them and their message and their work.

ADMINISTRATIVE COSTS

As I understand now, Dr. Farber, your remarks with reference to this administrative cost, this indirect cost of these experiments that are carried on, you said that unless you can get the ceiling lifted beyond the 15 percent, that you feel perhaps you cannot even use the money that is being appropriated at the current level.

Dr. FARBER. We will be able to use it but with a much greater effort on the part of us who are trying to encourage institutions and scientists to take on a greater responsibility and accept a greater challenge.

Senator STENNIS. It thereby handicaps and circumscribes you considerably?

Dr. FARBER. There is no question it makes it more difficult to mount these programs and make the kind of progress we are trying to make. This holds for all parts of the country.

Senator THYE. May I ask frankly, Doctor, what is the need of the percentage written into the law.

Dr. FARBER. I think that is the same percentage that is being worked out for the National Science Foundation and all Government agencies. I think the Killian committee is at work on this, and whatever that percentage is—I have no personal conviction on this point—those people who are most expert in this field have told me that the cost is nearer 35 than 25.

Senator THYE. Would there be any abuse of the funds if there were no specific percentage written into the act?

Dr. FARBER. I don't believe so at all. I have no fear of that.

Senator THYE. That would be my own personal belief.

Dr. FARBER. I would like to see the full cost of research without this archaic division into direct and indirect cost. There is the cost of research, one figure, one sum really.

Senator HILL. You would check carefully the cost but you would allow the full cost, whatever that checking showed?

Dr. FARBER. Yes; under the eyes of the auditors of the National Institutes of Health. It is a very good eye.

Senator HILL. It is a capital I?

Dr. FARBER. Yes; I can subscribe to that.

Senator HILL. Any more questions?

COMMENTS ON STATEMENTS

Senator Stennis, I am glad you spoke of the earnestness and convictions with which these distinguihsed doctors have addressed us this afternoon.

I would like to emphasize this, that we have to justify our recommendations to the full committee and then we have to justify the actions of the full committee to the Senate. These gentlemen have not only spoken with earnestness and conviction but you know the good book speaks of speaking with authority. These gentlemen speak with great authority. I think it is well that we have the committee bear in mind that we have had these witnesses when we go before these other bodies to justify our position.

Here this afternoon we have with us, and I do not want to embarrass these gentlemen, they are all modest men, but we have with us one

of the world's greatest virologists; as I said in the beginning, a Nobel prize winner.

Dr. Ravdin is not only one of the great surgeons of the world but he has the rare distinction that he is one of the few surgeons in all American history who has ever had his hands in the abdomen of the President of the United States.

There is no more dedicated man than our friend here, Dr. Farber. His life has been dedicated to this fight against cancer, particularly against leukemia, trying to save the lives of our children. So when we go out with our recommendations we may know that we could not go sustained and supported by higher or greater authority with which these gentlemen here have spoken to us this afternoon.

Certainly we want to express our gratitude to you and thank you so much for your fine contributions here this afternoon.

Dr. RAVDIN. Thank you, Mr. Chairman.

Senator HILL. Dr. E. Cowles Andrus, physician in charge of the adult cardiac clinic, Johns Hopkins School of Medicine, and chairman of the planning committee, National Advisory Heart Council.

Dr. Andrus has honored us with his presence before. He has come from a medical school that is not quite as old as the University of Pennsylvania Medical School, but certainly a medical school that has made a fine contribution to the teaching of medicine as any other medical school in the country.

Doctor, I do not want to embarrass you, but I really believe Dr. Hosmer, Dr. Welch, and Dr. Halstead, and Dr. Howard A. Kelly at Johns Hopkins were the great pioneers in the teaching of clinical medicine such as you have today. Is not that true?

Dr. ANDRUS. It does not embarrass me to say so.

Senator HILL. We appreciate your being here and we shall be glad to have you proceed in your own way.

JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE

STATEMENT OF DR. E. COWLES ANDRUS, PHYSICIAN IN CHARGE OF THE CARDIAC DIVISION OF THE MEDICAL CLINIC, AND CHIEF OF THE CARDIOVASCULAR AND PULMONARY LABORATORIES, JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE

PREPARED STATEMENT

Dr. ANDRUS. Thank you, Senator.

I have a prepared statement which I would like to file for the record.

Senator HILL. Your full statement will appear at this point in the record.

(The statement referred to follows:)

My name is Dr. E. Cowles Andrus. I am an associate professor of medicine at the Johns Hopkins University School of Medicine, physician in charge of the cardiac division of the medical clinic, and chief of the cardiovascular and pulmonary laboratories there.

I have completed a term as member of the National Advisory Heart Council. I am currently senior scientific adviser to the National Heart Institute, and past president of the American Heart Association.

I was an assistant to the Chairman of the Committee on Medical Research in the Office of Scientific Research and Development and have served in some advisory capacity to this program since 1941.

I think that my considerable personal experience as a teacher, practicing cardiologist, and research worker combined with a familiarity with medical research and education needs on a national level provide a knowledgeable basis for the statement I wish to give.

I wish to reaffirm an urgent plea to further strengthen the program of the National Heart Institute to continue the momentum of progress that is being made against diseases of the heart and circulation. Over the past 10 years I have become intimately acquainted with the work of the Heart Institute and the remarkable stimulus it has provided to the development of research talent and research accomplishments both within its own intramural program and also within the medical community throughout the country.

With the guidance of the National Advisory Heart Council the appropriated funds have been wisely administered and a sound fundamental program exists. The problems presented by cardiovascular diseases are many and diverse. A major emphasis has been to develop a dual program to support research of competent medical scientists and to train other talented young scientists for careers in medical research. The program has been successful. It is encouraging to see the increasing numbers of new research workers who are eagerly joining and even providing beneficial competition with senior scientists in many facets of cardiovascular research.

At the last National Advisory Heart Council meeting, approximately $1½ million worth of meritorious research projects could not be paid because of lack of funds. The administration's budget request for fiscal year 1959 would not allow for any increase in funds for research projects. Neither would it allow any increase in funds to encourage a greater number of talented young scientists to obtain specialized research training.

It would be tragic to curtail needed research funds or to reduce our encouragement of new research workers when so much of the battle is still to be won. My Scotch ancestry gives me a natural concern for the proper use of Government funds from tax dollars. However, I personally feel that the increase in funds requested is needed, and would make the wisest type of investment for the country as a whole.

A more realistic reflection of funds that could be fruitfully used would be the amounts that Dr. Wright and I recommended in our testimony before the subcommittee of the Committee on Appropriations of the House of Representatives in the attached table.

The sound base that cardiovascular research has gradually developed now makes possible a more vigorous implementation of new research areas and promising leads. In our House testimony we provided a list of specific areas that we believe warrant initiation or expansion. I wish to include this list here.

PRODUCTIVE AREAS FOR INITIATION OR EXPANSION

The following specific activities deserve a high priority for initiation or expansion.

I. Atherosclerosis (including coronary heart disease and cerebral atherosclerosis)

1. Research in basic lipid chemistry of atherosclerosis using new techniques with the gas chromatograph and mass spectrograph.
2. Basic research in blood coagulation mechanisms.
3. Development of thrombolytic and fibrinolytic agents to prevent or dissolve blood clots within the body.
4. Expand geographic pathology studies of coronary heart disease and cerebral atherosclerosis—
   (*a*) Within the United States and Territories;
   (*b*) International studies.
5. Establish clinical trials of the effect of lowering serum cholesterol—
   (*a*) In reducing the risk of recurrence of coronary or cerebral thrombosis in patients who have survived an attack.
   (*b*) In reducing the risk of thrombotic events in normal adults.
6. Studies of precipitating factors of coronary or cerebral occlusion.
7. Development of agents to block cholesterol formation in the body.
8. Development of nonfeminizing estrogen compounds.
9. Development of new biochemical tests for atherosclerosis.
10. Development of reference standards for laboratory tests used in clinical research and diagnosis of atherosclerosis.
11. Long-term clinical followup studies of the natural course or coronary disease and of cerebral atherosclerosis.

12. Development of physiological and quantitative measures of stress.
    Instrumentation for objective measurement.
    Study of stress effects upon the cardiovascular system.
13. Improvement of tests of cardiac function and physical fitness.

II. Hypertension

1. Systematic study of natural blood pressure regulating factors.
    Isolation.
    Purification.
    Synthesis.
    Synthesis of anticompounds to counteract pathological states.
2. Development of nontoxic effective blood pressure lowering agents.
3. Comparative studies of hypertension in animals.
4. Clinical studies of long-term effects of blood pressure lowering agents.
5. Epidemiological studies of hypertension in different populations.
    Ethnic factors.
    Cultural.
    Racial.
    Occupation.
    Environmental factors.

III. Rheumatic fever and rheumatic heart disease

1. Basic research into the etiology and pathogenesis of rheumatic fever.
    Immunological and biochemical studies.
2. Epidemiological studies.
3. Refinement of fluorescent antibody tests for rapid identification of streptococci.
4. Testing methods of rheumatic fever control.
5. Long-term followup of patients who have undergone valve surgery.

IV. Aging

1. Comparative biological aspects of aging.
2. Cellular physiology, metabolism.
3. Experimental embryology, genetics, nutrition.

V. General areas of emphasis

1. Population studies for factors related to cardiovascular diseases.
2. Long-term followup studies of normal individuals and individuals with specific cardiovascular diseases.
3. Establishment of a primate colony for research related to atherosclerosis, hypertension and other cardiovascular diseases.
4. Research into virological effects on the cardiovascular system.
5. Public health research and demonstrations into the application of available knowledge of prevention, detection methods, dietary modifications, laboratory services and rehabilitation.

The following is a list of disciplines and research areas that have been stressed by different groups of medical specialists as deserving particular attention:

Basic sciences.—Morphology, pathology (experimental, geographic), epidemiology, genetics (especially human), nutrition, physical biology.

Special areas and problems related to the cardiovascular field, excluding clinical.—Comparative biological aspects of aging, fetal physiology, viral effects on cardiovascular system, primate research, cardiorenal physiology, comparative aspects of different cardiovascular systems throughout the animal kingdom, comparative and biochemical aspects of blood coagulation, cardiovascular drugs, their development, evaluation and mechanism of action (this should particularly include the hormones), chemical research on lipids (gas chromatography), microcirculation, smooth muscle, general muscle biochemistry, problems of ion transport across membranes, the control of the central nervous system over the cardiovascular system (CNS/CV).

Clinical areas.—Long-term clinical followup studies, rehabilitation of the cardiovascular patient, cardiopulmonary research (methods for measuring human performance), development of artificial organs (lungs, kidneys, heart pumps, etc.), practical aspects of anticoagulants and specific diseases, e. g., thrombosis, shock, congestive heart failure.

Additional funds would be used in three ways:

(*a*) To accelerate research in areas already active (e. g., research on muscle contraction, or cardiopulmonary physiology, cardiovascular surgery).

(*b*) To give assistance in underdeveloped areas (e. g., research on aging, human genetics, geographic pathology).

(*c*) To help build up new disciplines and techniques (e. g., physical biology, cardiovascular research on primates, gas chromatography as a tool in the study of lipids, endocrinology).

Training grants:

(A) Undergraduate training grants:

Inclusion of Seton Hall.

Limited special requests.

B. Chronic disease training grants: Applications would be considered as part of graduate research training grant program.

C. Graduate research training grants: To stimulate and support training of qualified young men and women through research training grants to various medical schools, universities, and colleges. Areas of importance to the cardiovascular field are: Comparative biology, lipid metabolism and nutrition, blood coagulants, reproductive physiology, pulmonary and renal physiology, pharmacology, endocrinology, genetics, geographic pathology, and epidemiology.

D. Graduate clinical training grant: As newly developed preventive, diagnostic, and therapeutic methods are perfected, it is essential that they be made available to practicing physicians, nurses, and public health workers as rapidly as possible. In order to accomplish this, the graduate clinical training grant program provides funds to selected training centers throughout the country. Additional funds would provide for additional training centers particularly in those clinical techniques in dire shortage areas (e. g., cardiovascular nursing, cardiovascular preventive medicine, cardiovascular surgery).

Our recommendation for research grants is $26 million at a 15 percent indirect cost level. We would favor increasing the payment of indirect costs to the 25 percent level, however, we would not wish to do this if it means reducing the net funds available for research.

For research fellowships $2,375,000 is recommended, for training grants $7,740,000, State control programs $2,125,000, direct research operations at the Heart Institute $6,876,000, intramural training activities $130,000, and professional and technical assistance program $1,120,000.

In my testimony before the House subcommittee, I cited the need for long-term clinical followup studies of individuals with specific types of cardiac disease. Valuable research information could be gained from such studies if added funds were available.

For 30 years I have been interested in training young men in research, teaching medical students, and conducting some cardiovascular research myself.

The longer I deal in this field, the more I am impressed with the importance of replenishing the supply of new young minds to develop new knowledge—not simply training as practicing cardiologists but training in research to produce new information useful to all.

This was wisely recognized in the very early program of the National Heart Institute. I have had the privilege of meeting many of these young individuals as I visit medical centers throughout the country and have been greatly impressed by the maturity of their development under this program of assistance which began with the training grants provided by the Congress.

These new mature research workers are now, over the period of 10 years, in a position to reproduce themselves by training younger individuals in the field. The vitality and originality that is characteristic of this group provides good promise for the future. It is for this reason I strongly urge the increase in funds for training grants.

I wish to mention another program which is of crucial importance at this time. It is a part of the direct operations of the National Heart Institute providing professional and technical assistance to states and communities in the development of public-health research and in the application of knowledge for the benefit of the public. It is urgent that fully evaluated heart disease research results should be applied and made available to the American people without delay. Promising techniques and new methods of public health research and prevention of disability from heart disease should also be initiated in community studies and demonstration areas.

Medical personnel assignments

It has been demonstrated that in public-health programs fully evaluated research results can best be applied to accomplish the detection, prevention, and management of heart diseases by the temporary assignments of medical personnel to the State health departments. There is a large body of tangible knowledge which would enable health departments and physicians in private practice to combine forces to find and treat children with rheumatic fever or congenital

heart defects, rehabilitate victims of cardiovascular accidents, and insure special nutrition, nursing, and other needed services.

Seventeen medical officers and two nurses are currently assisting States in starting and carrying on programs of public-health research or application of present heart knowledge. Many other States have asked for professional assistance in similar activities. Increasing the number assigned next year would mean repeating these experiences in several States and cities. For example:

In Chicago: 2,000 new cases of rheumatic fever and rheumatic heart disease have been located and placed on a prophylaxis program to prevent further heart damage. A permanent heart disease control unit has now been established by the Chicago Board of Health. Dr. Jeremiah Stamler, a well-known research worker, has developed an interest in epidemiological studies of heart disease and has accepted the position as head of the new unit.

In North Dakota: A study involving 80 private physicians, the State health department, and the State heart association is cooperatively investigating why that State has a relatively low age-adjusted coronary disease death rate.

In Georgia: Several new diagnostic clinics were established and two new epidemiological studies of arteriosclerosis, comparing vegetarians and meat-eaters are underway.

In Oklahoma: New case-finding activities in two county areas, and unique combined training programs for physicians, health officers, nurses, dietitians, and others working in the cardiovascular disease area are in progress.

In Colorado: Studies in the detection of congenital heart disease among schoolchildren were made.

In Louisiana: One of the most comprehensive studies of Asian influenza effects on the cardiovascular system was recently carried out by Dr. George Burch and other research workers at Tulane. The medical officer assigned to the State health department was a key coordinator for the various studies making possible the accumulation of important knowledge about the effects of influenza on the heart during the hectic period of the epidemic.

Post-heart-attack care

Considerable knowledge is available but often not completely or most effectively applied in care after a heart attack. State and local health departments need assistance in developing followup services for the physician in caring for patients who have had an acute coronary attack, cerebrovascular accident, or who have not received adequate prophylactic measures for rheumatic fever or have recurrent congestive heart failure.

Additional funds would enable the technical assistance program to make available the help of public health specialists in rehabilitation, nursing, and nutrition to establish local programs of followup services to aid physicians in returning patients to useful community lives.

Community clinical studies

Clinical trials to test the effectiveness of dietary or other measures for possible prevention of coronary heart disease will need to be undertaken in a systematic manner as soon as they can be organized. Observations on sizable numbers of patients will be needed to determine whether or not a particular regimen for lowering serum cholesterol will in fact lower the risk of initial or recurrent coronary heart attacks.

Professional staff of the heart disease control branch have had experience in cooperative clinical studies in the treatment of venereal disease and tuberculosis. Current coronary disease studies with private physicians in North Dakota and in Connecticut have given further experience in collection and analysis of clinical data. The increase in funds for professional and technical assistance will provide a nucleus of staff of necessary competence who can concentrate on planning and pilot testing of study designs in all stages from initial organization through to operation, collection, and analysis of data. Such a permanent team will be of inestimable value in helping to carry out collaborative therapy testing programs that are urgently needed. It is for these various reasons that we recommend an amount of funds for professional and technical assistance at the level of $1,120,000 for fiscal 1959.

Intramural training program

Another activity of greater importance than its modest cost might indicate is the intramural training program of the Heart Institute. Just as the support for training of young men in universities has proven fruitful so has this relatively new training program for some of the Public Health Service's own promising young professional personnel.

The $130,000 available in 1958 for this purpose has been used to strengthen research and operating programs in heart disease by enabling the provision of special types of training for key service personnel.

The progress made through 1958 has been gratifying. For example, four people from the Division of Hospitals were detached from duty in PHS hospitals in New Orleans, Baltimore, and Staten Island, and were assigned to neighboring institutions for training and experience in the technique and methodology of clinical research. These training assignments, undertaken at various times in 1957 and 1958, are now nearing completion, and these men will be returning to establish research programs in the Service hospitals where they are stationed. The training accomplishes two purposes—not only have these men been afforded the opportunity of the training needed to conduct research; they have also been establishing working relationships with nationally known investigators that will far outlast the training period. Broad plans are now in motion in New Orleans, where a building on the hospital grounds is being adapted for laboratory space, for a continuing cooperative research program between Drs. Walsh and Winblad and the men with whom they trained, Drs. Burch and Creech. There are indications of the development of similar working relationships between Dr. Smith in New York and Drs. Cournand and Richards (the Nobel prize winners with whom he is training), and the training of Dr. Garfield at Johns Hopkins.

An example of another type of training being provided is that of another gifted young man from NHI (Dr. Braunwald) who has been undertaking training at my own institution (Johns Hopkins). He will return to his own field soon, to head up a section in one of the Heart Institute laboratories.

In the technical assistance area an effort is being made to broaden the epidemiological approaches to cardiovascular disease by extending training to personnel in the field. Increasing the skills of key medical, nursing, and biometrics personnel is making their assistance to States and communities in developing field studies and prevention programs more effective.

Funds available in 1958 were $130,000. The amount provided for this activity in the President's budget for 1959 is $75,000. The developmental work done during the past year and one-half indicates that the full amount of $130,000 can be fruitfully used; indeed is urgently needed.

I would like to close with certain remarks which pertain to the research grants program of the National Institutes of Health as I have observed it over a period of years. I cannot speak too highly of the generous support which, thanks to the appropriations of Congress, this program has provided to medical research in the United States. New knowledge of disease and of the basic economy of the human body and the treatment of its illnesses has increased as one might say in geometrical proportions since this program was started.

I have been impressed too by the thoughtful and thorough administration which is applied to the distribution of these funds through the National Institutes of Health and to the administration of the projects which are thus supported.

In my testimony this morning I have urged the good offices of you gentlemen in increasing the funds to be appropriated to the National Institutes of Health to continue the intensification of the research attack upon disease. I have listened in wholehearted agreement to others who have made similar pleas. We should not, however, in asking for increased moneys for research and training grants, overlook a most important and basic circumstance. This concerns the need for adequate facilities and space for the organization at the National Institutes of Health to carry out the tremendous administrative burden involved in the effective use of these moneys and their distribution for research purposes.

On recent visits to the National Institutes of Health in its offices in Bethesda, I have been appalled at the office space arrangements in which this work must be carried on. Each year, the Congress has seen fit to increase the funds made available to the National Institutes of Health for research grants. As a result, the administrative activity necessary to carry out these programs has grown. Additional professional staff has been added. There has been no additional office space made available. Space has had to be rented in places as far away as Silver Spring. As a result, the administration of many programs is severely impaired by the wide separation of people engaged in the same activities. Literally, every available speck of space appears to be brought into use. Space originally designed for housekeeping closets, storage space, poorly ventilated and lighted, and grossly overcrowded, are typical of many of the office areas.

I am impressed with the morale and spirit of the people who have been forced to endure these kinds of conditions. The job they have done in administering these programs, I think, is an outstanding achievement in the Federal Govern-

ment. The avalanche of research applications processed and the numerous scientific review and council meetings held have all been carried out under the most difficult and disadvantageous circumstances because of inadequate space. It is my feeling that this situation is close to the breaking point. We cannot, in good conscience, increase the moneys to be administered by these programs without taking direct and effective steps to relieve the special conditions that exist.

It is my understanding that the National Institutes of Health have requested in their budget a year or two ago some $5 million for the construction of an office building of some 200,000 square feet in size. For reasons of which I am not wholly well informed, money to build this building has never been appropriated. It is my plea that this committee take direct action to make funds available for such an office building as soon as possible. In this connection, it is most important to take account of the changes that have taken place since the original proposal for the office building was made.

The research-grant program, as I recall, involved the expenditure of about $40 million when the proposal for the office building was made. In the current fiscal year, it is my understanding that this amount is now over $100 million, and the budget for the next fiscal year may be substantially increased. A building which would have been adequate to house the office space involved in administering the program of a $40 million level is utterly inadequate to house such activities for a program of over $100 million. In my rough calculation, I would think it would be necessary to double the proposed size of the building and increase the funds for construction by at least one-half, or up to $8 million. This building, I feel, is an absolutely necessary step if we are, in fact, seriously interested in effectively enlarging medical research and training in this country. This seems to be a most insignificant capital investment in an area of such great importance and tremendous significance.

Thank you.

	1958 appropriation	1959 President's budget	1959 citizen's budget	Net change over 1958
Grants:				
Research projects:				
Program	$16,843,000	$15,499,000	$22,613,000	+$5,770,000
Overhead	2,521,000	3,855,000	3,387,000	+866,000
Total	19,364,000	19,364,000	[1] 26,000,000	[1] +6,636,000
Research fellowships	1,375,000	1,375,000	2,375,000	+1,000,000
Training grants	4,240,000	4,240,000	7,740,000	+3,500,000
State control programs	2,125,000	2,125,000	2,125,000	0
Direct operations:				
Research	6,396,000	6,376,000	6,876,000	+480,000
Training activities	130,000	75,000	130,000	0
Professional and technical assistance	565,000	560,000	1,120,000	+555,000
Subtotal	34,195,000	34,115,000	46,366,000	+12,171,000
Additional funds required if overhead is converted to 25 percent			2,258,000	+2,258,000
Additional functions related to total program size:				
Review and approval (2¼ percent of increase)	515,000	504,000	780,000	+265,000
Administration (¼ percent of total)	93,000	93,000	125,000	+32,000
Total appropriation or estimate	[1] 34,803,000	34,712,000	49,529,000	+14,726,000

[1] Excludes comparative transfer, $1,120,000, and savings, $13,000.

General Statement

Dr. Andrus. I want to testify as an individual who has practiced cardiology and who has been a teacher and done some investigation in research training in this field.

First of all, I want to express my appreciation for the opportunity to appear here. If I appear alone, it is because Dr. Wright, who had hoped to accompany me, had an unavoidable lectureship to fill in Chicago. I count on the knowledgeable concern of this committee for the dimensions of the problem—we deal with a disease or group of

diseases which kills more Americans than any other—and the well-informed interest that they have displayed before.

ANNIVERSARY OF PUBLIC HEALTH SERVICE ACT

It is a happy custom in this country to refer to anniversaries, and it so happens that, in 1 month, 10 years will have elapsed since the Congress put into law an act to amend the Public Service Health Act to support research and training in diseases of the heart and circulation, and to aid the States in the development of community programs for the control of these diseases, and for other purposes.

Senator, I believe you had a part in that, and others. In those 10 years, I think it is fair to repeat what has been said by Dr. Paul White, that in the forms of heart disease we have learned more than we have learned in the prior 50.

I have a copy of a letter to you, sir, from Dr. White, with whom I communicated regarding the remarks that I proposed to make today, as I have done with Dr. Wright and others. Dr. White's letter reinforces some of the statements which will appear in the prepared testimony.

Senator HILL. We will have the letter of Dr. White and enclosure appear in the record following your statement.

(The letter referred to appears on p. 1655.)

Dr. ANDRUS. Thank you, sir.

STRENGTHEN PROGRAM OF HEART INSTITUTE

I wish to reaffirm an urgent plea to further strengthen the program of the National Heart Institute to continue the momentum of progress that is being made against diseases of the heart and circulation.

It must seem to you gentlemen who sit on these committees and hear the various groups testify that we all say the same thing in certain terms. Certainly, I can associate myself with much of what the gentlemen from the Cancer Institute said with regard to needs, to momentum, of progress, and to the excitement which the advances already in view create.

With the guidance of the National Advisory Heart Council, the appropriated funds have been wisely administered and a sound fundamental program exists. The problems presented by cardiovascular diseases are many and diverse.

DUAL PROGRAM NEEDED

The major emphasis has been to develop a dual program to support research of competent medical scientists and to train other talented young scientists for careers in medical research. The program has been successful. It is encouraging to see the increasing numbers of new research workers who are eagerly joining, and even providing beneficial competition with, their elder senior scientists in many facets of cardiovasular research.

RESEARCH PROJECTS APPROVED

I am reliably informed that, at the last National Advisory Heart Council meeting, approximately $1.5 million worth of meritorious research projects were approved which cannot be paid because of lack of funds. This statement applies to the administration's budget request for fiscal year 1959. Neither would it allow any increase in funds to encourage a greater number of talented young scientists to obtain specialized research training.

It would be tragic to curtail needed research funds or to reduce our encouragement of new research workers when there is still so much to be done. My Scotch ancestry gives me a natural concern for the proper use of Government funds from tax dollars. However, I, personally, feel that the increase in funds requested is needed and would make it a wise type of investment for the country as a whole.

A more realistic reflection in my opinion of funds that could be fruitfully used would be the amounts that Dr. Wright and I recommended in our testimony before the Health Subcommittee of the Committee on Appropriations of the House of Representatives.

This, I believe has been furnished you in tabular form.

Senator HILL. Refresh our recollection. What is the full amount you recommended there?

INCREASE FOR INDIRECT COSTS

Dr. ANDRUS. The full amount recommended for research there is $26 million. That is at the 15 percent indirect cost level. We would favor increasing the payment of these indirect costs to 25 percent or to the actual cost as determined by proper survey. But we would not wish to do this if, as would be the case in the current budget recommendation, the total overall appropriation for research projects is not increased but the overhead or indirect cost is increased.

That simply would be to milk the $1.5 million out of the available funds for research. For research fellowships, $2,375,000 is recommended. That represents an increase of $1 million over last year.

TRAINING AND RESEARCH GRANTS

The research grant recommendation is $6,636,000 in excess of last year. For training grants a considerable increase, $3.5 million, to a total of $7,740,000. For State control programs, a reaffirmation of the current budget, $2,125,000. For direct operations at the Heart Institute, $6,876,000, which would be distributed principally in provision for additional research and does not include professional and technical assistance about which I will have something to say in a moment.

The sound base that cardiovascular research has gradually developed now makes possible a more vigorous implementation of new research areas and promising leads.

In our House testimony we provided a list of specific areas that we believe warrant initiation or expansion. This is included in the prepared statement, which I have provided.

ATHEROSCLEROSIS

I want to emphasize one or two of these points. In the field of atherosclerosis, that is, disease of the arteries, notably the coronary arteries supplying the heart muscle and the cerebral arteries which supply the brain, there have been promising advances.

Certainly in the past 10 years there has been a phenomenal increase of interest in this subject on the part of competent research workers. From time to time cures are announced or remedies are highly recommended, however, only to be followed by disillusion, or failure due to lack of basic knowledge of the processes involved in producing the abnormality.

I would like to emphasize that it is the promise implied by our ability to influence the course of some processes which we regard as fundamental to the development of this disease which should give interest to further and intensive investigation.

I refer particularly to an experience which has been reported in the last 3 or 4 years from widely separated areas in the world, from California, Canada, New York, London, and from South Africa, that the content in the blood of a certain substance called cholesterol, a fatty material which is found in the abnormal areas in the arterial wall, can be influenced in the direction of abnormality by changes in the diet.

REDUCING CHOLESTEROL

It has been independently observed that if the dietary content of fat which is derived from animals is in part replaced by fat obtained from vegetable sources, the blood cholesterol progressively falls to a normal or average level.

The assumption is, and thus far it can only be an assumption, that reduction in the amount of this substance circulating in the blood may slow down the development of arteriosclerosis or even cause it to retrogress after it is developed.

Let me interject here the observation that physicians at the Mayo Clinic in the last few years have demonstrated that it is possible, also, to rapidly reduce the cholesterol content of the blood by the administration of large doses of a substance which in smaller amounts has the property of a vitamin. Nicotinic acid is the one I refer to.

Unfortunately such large doses are intolerable to some individuals since they cause unpleasant effects.

Another promising field of investigation along this same line stems from the observation that in different parts of the world where dietary habits differ the frequency of death from coronary artery disease seems to vary in impressive proportions.

Many investigations already under way, which are in fact collaborative efforts with scientists in different countries, promise to develop important information in this field.

INTERNATIONAL NATURE OF PROBLEM

It is appropriate at this point to say that I agree entirely with the statements which my predecessor made before you this afternoon concerning the international nature of the problem and of the knowledge which must be at the basis of the relief of this problem.

One can assemble enumerable examples of advantages which have accrued to us from discoveries made abroad and of discoveries made in this country which have inevitably benefited those in other lands.

To mention a few, the X-ray was discovered by a German. Forstman, who received the Nobel prize last year for the cardiac catheterization technique along with Richard Cournand was a German. Fleming who discovered penicillin was a Britisher. Sulphonamides were developed as a dye first by a German. The production of arteriosclerosis in animals was given enormous impetus by the discovery of Anitchkow, a Russian, in 1914, and there are a great many people walking around in this country now with normal blood pressure because somebody in India found that a plant would reduce it.

I do not need to emphasize that such things as the Salk vaccine benefits those in other countries. The work that my colleagues, Drs. Taussig and Blalock, have done was rapidly transmitted to other countries and that work was in cardiac surgery.

Our great physiologists were internationalists in the sense they were known abroad and people from abroad came to study with them.

INFLUENCING CONSEQUENCES OF DISEASE

In addition to the fundamental studies on the development of arteriosclerosis there are promising leads in the direction of influencing its consequences. Dr. Wright, who I had hoped would appear with me, has been a leader for many years in the investigation looking to the prevention of the clotting process which is in fact what causes the blockage as a consequence of arteriosclerosis. It is not too much to hope that in this field substances may be developed that will even disolve clots in whole or in part and at the same time not do damage or injury to the vessels of the patient. The influence of hormones in the field of cancer has been mentioned by the gentlemen who preceded me. There is a genuine need for the further testing of the influence of these substances in the development and control of arteriosclerosis. You have heard others testify, I am sure, in the past to the fact that the female sex hormones seem somehow to inhibit this process.

Unfortunately, the administration of female hormone to males to control the disease is accompanied by unacceptable effects to many patients, but I think there are promising leads in the direction of the synthesis of substances which it is hoped will have the beneficial effect without the side effects.

BIOLOGICAL ASPECTS OF AGING

There are 1 or 2 other areas which I would like to emphasize in this list which we have provided. This committee and the Congress have shown their interest in providing for research in the biological aspects of aging. Progress in this field has been provided on a sound basis in the last 2 years by the organization of 2 projects, 1 at Duke University and the other at the Albert Einstein in New York, in which the disciplines of many sciences, including the social sciences, will be brought to bear on this problem.

FOLLOW-UP ON THERAPY

Another general area which requires emphasis is our ability to follow patients long enough to determine the consequences of therapy we apply. We are handicapped in this direction by inability to provide for their hospital service or for X-rays, special laboratory studies, which cannot be construed as necessary to their medical care but which are fundamentally necessary to the development of new knowledge about the disease from which they suffer.

It is currently difficult to obtain funds, speaking as an investigator, for this purpose, primarily I presume because no foundation or agency which provides funds for research wants to get into the matter of medical care which can be extensive to the point of seriously diluting the funds for research.

However, some realistic facing up to this aspect of the problem is going to be necessary.

ANIMAL RESEARCH

Finally we mentioned briefly in the testimony before the House subcommittee a proposal which is still in the planning stage. It concerns the fact which is somewhat in contrast to the point which Dr. Stanley so ably emphasized, namely the fact that there are certain biological processes which are common to all living beings. When one deals with the circulation and particularly with the heart, one is somewhat confined in his observations by the fact that the animal with which you may be experimenting, granting that you can not experiment on man, does not closely enough represent the structures which exist in man.

It is unflattering but true that among the common animals available for cardiovascular research the one that most closely resembles man, as far as its heart and circulation is concerned, is the pig.

Senator HILL. Are you coming to the Darwinian theory now?

Dr. ANDRUS. You have not heard what else I have to say, Senator.

Now there are other reasons why the pig is not an ideal animal with which to work. That leads me to describe the interest which has developed and is being seriously studied in the National Heart Institute in the formation of a colony of primates, of apes and monkeys, a population which can be controlled, in a facility at which studies can be made and to which scientists from all over the world can come to carry out investigations.

It will call for considerable outlay when it is thoroughly programed but it should provide an impetus to research in the cardiovascular field, and I venture to say in others, which cannot otherwise be accomplished. You have probably been told that under the aegis of Pavlov, the Russian scientist who worked so long on conditioned reflexes, a similar colony was established in the Crimea 30 years ago. It has been visited by various scientists from this country, lately by Dr. Karl Meyer. They have a pedigree population there which permits the sort of studies which cannot be accomplished otherwise. I need not emphasize to this committee the consequences of the wise appropriation of funds for the training of young minds in this field.

USE OF VETERANS HOSPITALS

Senator HILL. Doctor, excuse me 1 minute. While we are still thinking about long-term care and follow-up care, do not the Veterans' Administration hospitals give us an opportunity there to at least do some of the work that you contemplate?

Dr. ANDRUS. I wish I could answer that, sir, on the basis of better information than I possess. There are Veterans' Administration hospitals closely associated with a good many medical schools. The populations are selected in the sense that they are veterans or their dependents. I certainly would not exclude that possibility. Another possibility is that the United States Public Health Service hospitals in the neighborhood of medical schools can be used. As a matter of fact, I am just back from the west coast where I visited the United States Public Health Service hospital in San Francisco.

Senator HILL. The Marine Hospital?

Dr. ANDRUS. Yes, in connection with a project jointly to be carried by a very brilliant young woman on the staff and one of the professors of medicine at Stanford.

I looked forward to a similar association with the United States Public Health Service Hospital in Baltimore through Dr. Claude Garfield who has been in my division this past year and who will return to the public health service hospital there.

Senator HILL. I have felt for sometime that we were missing a great opportunity not to do more of the very thing you are talking about, both in what we used to call marine hospitals—now we speak of them more as you have said, the public health service hospitals—and also in our veterans hospitals.

Dr. ANDRUS. By and large I think the public health service hospitals are geographically closer to medical schools than veterans hospitals.

However, there is a good deal of collaboration between the hospital for chest diseases in Baltimore, the veterans hospital, and the division of pulmonary physiology and disease at Johns Hopkins. I speak of examples with which I am familiar. I am sure there are others.

Senator HILL. I think some of our older veterans hospitals were not too well located. After Dr. Hawley came in and Dr. Magnuson and others, since the days of Hawley, the idea has been to locate our veterans hospitals near our schools, near medical centers so to speak, and it seems to me that certainly we should make more use of the opportunity with those veterans hospitals.

I may say in Alabama we have three veterans' hospitals. The largest one is at Birmingham, Ala., right in the University of Alabama medical center. So it seems to me it affords an opportunity. I have thought for some time we have the United States Public Health Service engaged on the one hand with the National Institutes of Health in research, and they are doing a fine job; but on the other hand they have these marine hospitals, and up to date we have not encouraged them to go into any of these hospitals on any of this research.

Dr. ANDRUS. You are much more familiar than I could be, sir, with available resources. I can assure you there are examples of close collaboration between veterans' hospitals and medical schools in the field of research, investigation, and teaching.

Many could be mentioned, in St. Louis, in Boston, in New York.

Senator HILL. How far is the nearest veterans' hospital in Maryland to Johns Hopkins?

Dr. ANDRUS. Excepting this chest hospital, which is about 2 miles from the medical school in town——

Senator HILL. And there the chest hospital is tied in pretty close with the chest men at Hopkins?

Dr. ANDRUS. Yes. There is no formal relationship as far as administrative control is concerned but there is a good deal of collaboration and investigation over there.

COMMUNITY STUDIES AND DEMONSTRATIONS

I wish to mention another program which is of crucial importance at this time and this is part of the direct operations of the National Heart Institute, providing professional and technical assistance to States and communities in the development of public health research and application of knowledge for the benefit of the public. It is urgent that fully evaluated heart-disease research results should be applied and made available to the American people without delay.

Promising techniques and new methods of public health research and prevention of disability should be initiated in community studies and demonstration areas.

It has been demonstrated that in public health programs fully evaluated research results can often be well applied to accomplish the detection, prevention, and management of heart disease by temporary assignments of medical personnel to State health departments. There is already a large body of tangible knowledge which would enable health departments and physicians jointly in private practice to combine forces to treat children with rheumatic fever or congenital heart defects, to rehabilitate victims of cardiovascular accident and to insure special nutrition, nursing, and other needed services. I am told that 17 medical officers and two nurses are currently assisting States in starting and carrying on programs of public health research or application of present heart knowledge.

Many other States have asked for assistance in similar activities. Increasing the number assigned next year would mean repeating these experiences in several other States. I would like to give a few examples.

In Chicago, 2,000 new cases of rheumatic fever and rheumatic heart disease have been located and placed on prophylaxis to prevent further heart damage. A permanent heart-disease control unit has now been established by the Chicago Board of Health. This is the consequence of the assignment of a public health officer there to develop this originally.

In North Dakota a study has been organized involving 80 private physicians, the State health department and the State heart association investigating why that State has a relatively low age adjusted coronary disease rate.

In Georgia several new diagnostic clinics were established and two new studies of arteriosclerosis, comparing whites and Negroes, vegetarians, and meat-eaters, are underway.

Senator HILL. Do you find enough clinical material among the vegetarians?

Dr. ANDRUS. Well, in some colonies, yes.

In Oklahoma, new case finding activities in two county areas and a new combined training program for physicians. I could go and enumerate others.

In Louisiana one of the most comprehensive studies of effect of influenza effects on the cardiovascular system was recently carried out by Dr. Burch at Tulane and the medical officer assigned to the State health department was the key coordinator for these studies.

CLINICAL TRIALS NECESSARY

Clinical trials to test effectiveness of dietary or other measurements for the possible prevention of coronary heart disease will need to be undertaken in a systematic manner. Observations on a sizable number of patients will be needed to determine whether or not a particular regimen will in fact lower the risk. In this type of study the professional staff of the heart-disease control branch have had experience deriving from cooperative clinical studies in the treatment of such things as venereal disease and tuberculosis.

INTRAMURAL TRAINING PROGRAM

Another activity of great importance, greater than its modest cost might indicate, is the intramural training program of the Heart Institute. Just as support of the training of young men in universities has proven fruitful, so has this training program for some of the Public Health Services' own promising personnel developed fruitfully. The $130,000 available in 1958 for this purpose has been used to strengthen research and operating programs and the progress through 1958 has been gratifying. Unfortunately the amount provided for this activity in the President's budget this year is only $75,000.

I have had contact with men trained under this program. There are two at Johns Hopkins at the present time. I cannot help but feel that for the modest amount concerned it has paid very substantial dividends. I would like to reemphasize again the thoughtful and thorough administration which has applied to the distribution of research funds through the National Institutes of Health and to the administration of projects which are thus supported, but I want to conclude my testimony with a statement of a particular need.

In the past 10 years the amount of money available through appropriations for support of cardiovascular research and training has increased liberally. At the same time the administrative load connected with the scrutiny of research proposals and their administration has snowballed. Therefore, some concern must, I think be given to the need for adequate facilities and space for the organization at the National Institutes of Health to carry out this tremendous administrative burden. On recent visits to the National Institutes of Health and its offices at Bethesda, I have been appalled at the office space arrangements in which this work is carried on.

NEED FOR MORE SPACE

Each year the Congress has seen fit to increase the funds made available but there has been no additional office space made available.

Senator HILL. You mean when you increase the funds it has meant more duties, functions, responsibilities, and activities?

Dr. ANDRUS. It has required additional professional staff, but no additional office space has been provided.

Senator HILL. But they have not provided additional space for the personnel.

Dr. ANDRUS. That is right. Space has had to be rented in places as far away as Silver Spring. One building or one area which was built for animal quarters is being used for administrative purposes.

Space originally designed for housekeeping closets, storage space, which is poorly ventilated and lighted and grossly overcrowded, are typical of many of the office areas. Now I am impressed with the morale and spirit of the people who have been forced to endure these conditions. I think the job they have done is an outstanding achievement in the Federal Government.

The avalanche of applications and the numerous scientific review and council meetings have all been carried out under the most difficult and disadvantageous circumstances of inadequate space. It is my feeling that this situation is close to the breaking point. We cannot in good conscience increase the moneys to be administered by these programs without taking direct and effective steps to relieve these special conditions that exist.

EXCHANGE OF SCIENTISTS

May I at the end return to something which is close to my own heart and that is this matter of the interchange of scientists between this country and abroad. Mrs. Andrus and I are internationalists, she has a degree in international law. I cannot see in the fraternity of science there should be any recognition of nationality. I have had numerous men in the division at Johns Hopkins from abroad under various sorts of support, the International Cooperative Authority. There was a man there last year who was sent by the Aga Khan on a special gift.

Next year there will be a man there from Germany who applied for support from his own country to come to America to study. It was not forthcoming. He paid for this using his own resources, including selling his house. He spent a year with Richard Bing in St. Louis. He is this year with Helen Taussig at Johns Hopkins, next year he is going to work in my division. His resources will be exhausted by the middle of next year.

Until recently I was unable to persuade any foundation or any agency to underwrite the remainder of his stay. In a sense he was penalized by the fact that he was already in this country. There are means of bringing people over, but no means of taking care of someone here. Finally, through an appeal to Dr. Paul White, a modest sum was obtained through the Cabot Trust in Boston which will permit Burin to stay for an additional year.

He will go back to a university position in Germany. There are two universities already bidding for him. That is an example which could be multiplied. I got part of my own training in England and in Vienna. Ever since then I have been impressed with the fact that the scientists of each nation have something to give to the other and anything which interferes with the ease of this is in a sense an obstruction to science.

Senator HILL. There should be a stimulated flow, is that right, Doctor?

Dr. ANDRUS. In both directions.

Senator HILL. From us to them and from them to us?

Dr. ANDRUS. Yes.

WORK OF WORLD HEALTH ORGANIZATION

Senator HILL. There is a book just off the press, Doctors to the World, by Mr. Murray Morgan of Seattle, Wash., published by the Viking Press, which tells a good deal of the story of WHO.

When you read that story you realize that the World Health Organization is doing many fine things, but it is not in this field of the interchange of knowledge, isn't that true, from the standpoint of research?

Dr. ANDRUS. Not yet, although there are activities with which the Heart Institute has been associated and the Heart Association as well in the organization of conferences. I plan to visit the offices of the World Health Organization in Geneva this summer in connection with some of the conferences.

There was one held under its aegis in Washington last year concerned with the pathology of arteriosclerosis. The report on that should be out presently.

Senator HILL. But it has not been able to do much up to date?

Dr. ANDRUS. It has not had the funds.

Senator HILL. Really you have made remarkable progress in the matter of the heart, have you not?

Dr. ANDRUS. Certainly things are better off than they were but there is a long way to go.

Senator HILL. One thing that motivated me to make that statement is that I remember when an individual who had a coronary most people thought that was pretty much the end. He might live on but he certainly could not go forward with full duties and responsibilities, yet we know a number of persons today who have had coronaries, who are leading pretty strenuous lives. Not that any of us want a coronary.

Senator Stennis, do you have any questions.

Senator STENNIS. Mr. Chairman, I think that was a very fine statement.

There is one thing I did not fully catch in the beginning. You said, doctor, that the program was 10 years old and you said that it had accomplished more in 10 years than in the preceding 50. Isn't that what you said?

Dr. ANDRUS. Yes, sir; I think Dr. Paul White is the author of that statement.

Senator STENNIS. What program now were you referring to?

Dr. ANDUS. The research in heart disease.

Senator STENNIS. The basic law that was originally passed 10 years ago. I just wanted to get that fixed in my mind.

Dr. ANDRUS. The momentum of research which has been in liberal proportion supported by the Congress. It has been associated, of course, with research supported by private foundations, by the American Heart Association and by universities themselves.

Senator HILL. You spoke of the overall program of which the Government has been privileged to have a part.

Dr. ANDRUS. Yes.

SCIENCE MOST LIKELY INTERNATIONAL APPROACH

Senator STENNIS. I wanted to get that reference fixed in my mind. Since you are quite an internationalist in these matters, I might not be too much of an internationalist otherwise, but I made a speech in my own State not along ago and said that this avenue you mentioned in my humble opinion was the best avenue, the most likely avenue by which we could find an understanding between nations.

Dr. ANDRUS. I am certain of that.

Senator STENNIS. I am certainly glad to get your opinion on this as a real scientist. I think as to the reference a moment ago of the President's remark having singled out one nation in his state of the Union message, I do not think he intended to make any limit to adversary nations. He was referring in one medium there.

Through this, if I may mention something that goes with it, it seems to me television is going to leap clear over the heads of the diplomats and State leaders and everything else and bring an understanding. I have been greatly influenced by the film that Senator Ellender has made, himself, of little children playing in Russia, that he showed us here a few months ago. I mention that as another avenue of expression.

Senator HILL. Doctor, did you say that Mrs. Andrus was a graduate in international law?

Dr. ANDRUS. She has a masters degree in international law.

Senator HILL. You feel so strongly about this international cooperation that you did us the honor to bring your wife along today.

Dr. ANDRUS. That is right.

Senator HILL. Doctor, you certainly have maintained the high standard of the testimony that this committee has had before it. Your statement was most informative, stimulating, and helpful and we want to thank you and express our deep appreciation.

We are most grateful to you.

Dr. ANDRUS. Thank you.

(The letter of Dr White referred to on p. 1645 follows:)

BOSTON, MASS., *May 9, 1958.*

SENATOR LISTER HILL,
United States Senate, Washington, D. C.

DEAR SENATOR HILL: Because of my continued interest in and acquaintanceship with the vitally important program in the field of cardiovascular disease of the National Heart Institute of the Public Health Service, I am writing to emphasize certain points that should be seriously considered in your deliberations.

One of the objectives in which I have taken special interest and which is of vital importance in international medical relationships is that of the support of international teams working in the field in various countries to discover additional clues concerning the causes and to effect control of such serious conditions as coronary heart disease and coronary thrombosis, high blood pressure, rheumatic heart disease, and congenital defects.

In his state of the Union message, the President in his dramatic plea to the Russian people said "Another kind of work of peace is cooperation on projects of human welfare * * *. Indeed, we would be willing to pool our efforts with the Soviets in other campaigns against the diseases that are the common enemy of all mortals—such as cancer and heart disease. If people can get together on

such projects, is it not possible that we could then go on to a full-scale cooperative program of science for peace?"

Another area in the cardiovascular field is that of the training program, especially that concerning the direct training money so thoughtfully added years ago but cut this year by the Bureau of the Budget.

The third great need is that of funds to take the results of research to the people. In the National Heart Institute this broad area is inadequately supported in the technical assistance field; $1,200,000 were requested which includes a needed increase of $550,000. This was not granted by the House but we hope that it will be recommended by the Senate.

Finally, the growth of the grants program has been such that there is urgent need for an office building for the important workers in this program. At the present time there is an old wreck called T–6 in which this vital work is carried on. T–6 should be replaced by an adequate structure.

Sincerely yours,

PAUL D. WHITE.

P. S.—I am enclosing a copy of a recent article from Parade magazine which may be helpful also.

FOUR GREAT DISCOVERIES THAT SAVED A LIFE—HERE'S HOW TO GAGE THE REAL VALUE OF MEDICAL RESEARCH

By Paul Dudley White, M. D.

BOSTON, MASS.—Despite all that is said and written about medical research, many people still fail to understand its importance. To some, its meaning is vague. To others, it is mysterious. To still others, the white-coated men and women laboring in laboratories seem remote, their work too complicated to follow.

True, years of research may uncover only a fragment of knowledge. In itself, this is unexciting. It does not make a good headline. Even when such fragments are put together and lives are saved, the part research played may get lost in the shuffle.

Yet I believe there is a simple way to pinpoint the importance of research—by showing what it has meant to one American now living. Let's call him Robert Morse. His life was saved, like those of countless others, by magnificent progress against heart and blood-vessel disease—the leading cause of death in the United States.

I first saw Robert Morse in the summer of 1940 when he was a boy of 14 Examination revealed heart murmurs, high blood pressure. More important, there was a narrowing of the aorta, the great artery through which blood is delivered from the heart to other parts of the body. When this defect is present, it occurs at birth, but may not be discovered for several years. Only since the 1930's has it been diagnosed with a high degree of accuracy.

In 1940, nothing could be done for this condition—although it was generally recognized as a hazardous one. For the next 5 years, Morse was examined regularly and little change was found in his overall health. Then, in 1946, doctors here in Boston and in Stockholm devised an operation to correct the arterial defect. Morse was later to profit from this discovery.

For 3 more years he went along without need for treatment. But 1 day he fell ill. He felt fatigue, chills, fever, and pain. It was obvious that he had an infection which endangered his life. In previous years this infectious disease was almost invariably fatal.

DRUGS—THEN SURGERY

However, research had turned up ways to combat the disease. Morse's life was saved by massive doses of penicillin and chloromycetin, two widely used antibiotic drugs.

Two years later surgical techniques and knowledge had improved. It became possible for Dr. Robert Gross, the eminent Boston surgeon, to attempt to repair the defect of Morse's aorta.

The surgery was extremely delicate, truly a formidable task. It took 10½ hours. Dr. Gross successfully inserted a blood-vessel graft about 6 inches long. This served to replace the narrowed area of the artery and a good-sized aneurysm (a stretched, balloon-like area of the vessel) which had d——— through the years. Use of the ar———— was made possible by improvement in the techniques of storing vessel parts in blood-vessel banks.

Robert Morse recovered rapidly and has returned to a fully normal life. In the years that have followed, he has been entirely well. He was married in 1955. When I last saw him, he showed me a photo of his 6-month-old baby. He is working full-time and pursues leisure activities—such as golf—without difficulties.

This dramatic story illustrates the particular value of medical research in the field of cardiovascular disease and surgery. For Robert Morse was saved by four great research accomplishments. The four are spread over the fields of diagnosis, medical treatment, and surgery. Let's take them in order.

REMEMBER THE ROBERT MORSES

First, his deformity was diagnosed as a result of research carried out in the 1930's.

Second, the cure for his infectious disease—which doctors know as subacute bacterial endocarditis and endarteritis—came as a result of research in the 1940's.

Third, the surgical approach to his arterial defect also was the end-product of painstaking research.

Fourth, the successful operation was made possible by the development of an adequate blood-vessel bank.

This case is unusual, of course. But it offers dramatic evidence of accomplishment through research. There are uncounted other patients who have benefited from these and similar findings of the medical researchers through the years.

So, the next time you wonder about the value of research, stop for a moment and remember Robert Morse. Remember, too, the others whose stories are similar. I think you'll agree that if only Robert Morse had benefited from heart-disease research, the result would be worth the effort.

RECESS

Senator HILL. The committee will now stand in recess until 10 o'clock Monday morning.

(Whereupon, at 4:35 p. m., Friday, May 16, 1958, the committee recessed, to convene at 10 a. m., Monday, May 19, 1958.)

LABOR—HEALTH, EDUCATION, AND WELFARE, APPROPRIATIONS, 1959

MONDAY, MAY 19, 1958

UNITED STATES SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D. C.

The subcommittee met at 10 a. m., pursuant to recess, in room F–82, the Capitol, Hon. Lister Hill (chairman of the subcommittee) presiding.

Present: Senators Hill, Bridges, and Thye.

HEALTH, EDUCATION, AND WELFARE

NATIONAL COMMITTEE AGAINST MENTAL ILLNESS

STATEMENT OF MIKE GORMAN, EXECUTIVE DIRECTOR

MENTAL HEALTH ACTIVITIES

Senator HILL. The committee will kindly come to order.

Mr. Gorman, we would be very happy to have you come around. I think Dr. Kline and Dr. Goshen might come up with you. Come right up, gentlemen, and have seats.

I want to welcome you gentlemen to the committee this morning and tell you how much we appreciate your presence. We will be happy now to have you proceed in your own way.

Mr. GORMAN. Mr. Chairman, I have a prepared statement here.

Mr. CHAIRMAN. It will go in the record in full.

(The statement referred to follows:)

INDUSTRY'S ROLE IN A UNITED OFFENSIVE AGAINST MENTAL ILLNESS BY MIKE GORMAN, WASHINGTON, D. C., EXECUTIVE DIRECTOR, NATIONAL COMMITTEE AGAINST MENTAL ILLNESS

Mr. Chairman and members of the committee, "The Nation's billion dollar annual bill just for care of the mentally ill continues. The tragedy of mental illness for those who are stricken and for their families continues. With the spectacular and continuing advances in those diseases with a clear physical origin, it is obvious that the relative importance of mental illness will continue to increase over the years ahead. This is not defeatism, but the realism required if the problem is to be attacked most productively.

"The first attack is through research, and here results continue to be encouraging. Beginning with the 'tranquilizers,' a long series of drugs has appeared. Some of these 'energize' mental patients who have fallen into a stupor; others actually produce temporary insanity. For the first time in the history of man, the possibility of isolating the specific body reactions involved in the production of abnormal mental states appears possible. This exciting prospect calls for a research program as intense as can be mounted by the trained people available, and extended as rapidly as new investigators can be produced."

The incisive comments quoted above are taken from the official report of the Committee on Appropriations to the House of Representatives on March 25 of this year. In the light of this unmistakable mandate for an accelerated psychiatric research program, it is indeed disheartening that the administration this year has cut the amount available for research grants.

A year ago Dr. Robert H. Felix, Director of the National Institute of Mental Health, pointed out that he was running into a backlog of approved research requests which could not be granted because of lack of funds. The present reduction—from $12,402,000 in fiscal 1958 to $11,902,000 in fiscal 1959—will pile up a further backlog of research requests.

A close analysis of the 1959 research figure reveals that it must be largely devoted to the support of research projects already inaugurated. With the appreciable increase in research moneys authorized by the Congress over the past several years, many new projects were begun. In fiscal 1957 there were 265 new research projects being supported, and in the current fiscal year 293 are being supported. However, with the cutback contemplated for fiscal 1959 and with the rate of growth of research money abruptly reversed, it is estimated that only 145 new research projects can be undertaken during the coming year.

The severity of the cut is sharper this year too because many new programs have been started during the last several years under the research projects division—the Psychopharmacology Service Center, title V demonstration projects, basic research, etc. New money for these and all other new research projects will amount to only $2,374,000 in fiscal 1959, about $3 million less than moneys available for new research projects in the current year.

The National Committee Against Mental Illness is therefore proposing that the Congress allocate $15 million for research projects during fiscal 1959. It respectfully suggests that the bulk of this additional money go for the support of new research projects.

As a separate line item, the NCAMI proposes an additional appropriation of $5 million for the work of the Psychopharmacology Service Center, making a total of $7 million available to the center during fiscal 1959. During fiscal 1958, the center operated on a budget of $2 million. On the basis of an enormous increase in applications for drug study and evaluation work from all over the country, the Advisory Council to the center recommended a minimum of $3 million for this program last year. This was not granted, and the fiscal 1959 administration recommendation still holds the center at the $2 million level.

Back in 1955, when we first testified for the creation of a drug program in the National Institute of Mental Health, we pointed out that the next few years would probably see a flood of new psychiatric drugs on the market. Our most sanguine expectations have been exceeded. Today, it takes an IBM machine to keep up with the reports in the technical literature on new psychiatric drugs.

This creates an enormous problem for the Psychopharmacology Service Center. Where there were only a few drugs when it was established 2 years ago, there are now more than 2 score of these drugs on the market and many more coming out of the laboratories.

Furthermore, the drugs are still spearheading the remarkable revolution in psychiatry which we first sketched in our 1955 testimony. Last December, the National Institute of Mental Health released a report which documented the fact that the reductions in State mental hospital patient loads first noted in 1956 continued through 1957. This national reduction of more than 10,000 patients in those 2 years is equivalent to the entire mental hospital population of Virginia.

The most remarkable feature of this revolution is the almost miraculous increase in discharges. In fiscal 1955, there were approximately 120,000 mental patients discharged from our State institutions; in fiscal 1957 this had risen to approximately 145,000. Put another way, this is an increase of 20 percent in discharge rates during this biennium.

Even more challenging is the fact that this reduction in State mental hospital patients, the first such sustained reduction since 1773, occurred in spite of a 10-percent increase in admissions to these hospitals, and a decrease in the death rate of patients in the hospitals.

Because of the demonstrated impact of these drugs upon mental illness, it is all the more emergent that we now mobilize all this Nation's scientific resources in a total effort to accelerate this reduction in hospitalized mental illness. For that reason, it is our position that the Psychopharmacology Service Center should use the projected additional allocation of $5 million to enter into contracts with the pharmaceutical industry in the same effective manner that the National Cancer Institute has entered into contracts with industry. Since Dr. Nathan Kline will outline our industrial drug contract proposal in some detail, I would like to make

just a few general observations on the role of the pharmaceutical industry in the fight against mental illness.

The most clear-cut statement of the obligation of the pharmaceutical industry in this area appeared in the House Appropriations Committee report referred to previously. I quote the pertinent section from that report:

"The committee has not been persuaded that the existing program in psychopharmacology operated by this Institute is fully effective. More vigorous, maginative, and diversified approaches are called for. It does not appear, for example, that there has been a strong and effective effort to enlist the aid of the pharmaceutical industry. The committee trusts that this program will be more vigorously administered during the coming year. Research on such matters as why and how the new drugs work might well be more effecitvely stimulated, and the feasibility of systematic screening on a more adequate scale should be explored."

It is important to realize that the drug industry has enormous laboratory and scientific personnel resources at its disposal for this type of work. For example, just 2 weeks ago I toured the research laboratories of one of the finest drug houses in the country. I saw there personnel and equipment of a quantity and quality far superior to that of any medical school or university I have visited during the past 13 years.

In the laboratory division of this drug house, there are 125 doctors of philosophy and 95 scientists with a bachelor of science or its equivalent. Available to these scientists is the finest of laboratory equipment, including several reactors for the synthesis of drug products. In the course of a single year, this laboratory uses 70 monkeys, 250 dogs, and 100,000 mice and rats in its experimental work.

In that same drug house I saw a science information division which would be the envy of even the National Institutes of Health. The sole purpose of this division is to gather all available data on existing drugs and compounds in the fields in which this particular drug house is working. Employed in this one section of the vast pharmaceutical house are 25 doctors of philosophy and 20 masters of science in the chemical and biological fields. On intricate punchcards there are complete reports on 90,000 chemical compounds. The data on these chemical compounds is processed from all over the world, since the division has a number of scientists who translate from every language in the world. In addition, there are thousands of cards from doctors reporting on the specific reactions of patients to various drugs. There are 3,000 cards detailing all the important scientific work of clinical investigators, both here and abroad. Furthermore, innumerable scientific papers have been translated and placed on tapes.

There were 1,400,000 people admitted to mental institutions in 1957. Over and above this, it is estimated that several million people were treated in clinics and in private practice. In the name of these suffering people, and of their families and loved ones, what is wrong with this country availing itself of the tremendous resources of the pharmaceutical industry in the joint fight against this epidemic of mental illness? When our Department of Defense needs weapons, it goes to our great industrial plants, and it offers contracts running into the billions for the production of these weapons. It does not restrict its contracts to industry alone, it also contracts with universities for the scientific manpower also needed in the production of weapons.

By the same token, why can't the National Institute of Mental Health contract with whatever agency is best able to produce the most effective weapon or weapons against mental illness?

I have been forced into the foregoing remarks because of some of the antiquarian blasts from the pharmaceutical industry which greeted our drug industry contract proposal before the House several months ago.

In his address as retiring president of the American Pharmaceutical Manufacturers Association, Mr. Francis C. Brown, president of Schering Corp., was severely critical of the right of the Congress to determine the level at which medical research should move forward in this country. He accused the Congress, at the behest of "emotional pressure groups," of forcing excessive medical research on the National Institutes of Health and mandating "unwise" research programs.

Mr. Brown also attacked the House of Representatives mandate for a "more aggressive" psychopharmacology program as a step toward another "crash program" in the mental health field. He said this kind of program contained the seeds of "serious dangers" to medical progress and to the "future independence" of the drug industry.

The Congress was not the only branch of Government belabored by Mr. Brown. He criticized National Institute of Health officials for reporting, during budget

hearings, on clinical experience with various drugs. But he hit hardest at Congress for incorporating these NIH scientific comments in congressional committee reports as "a kind of official judgment of the drugs involved." He said this sort of thing is but a short step from an official Government "treatment of choice" which could lead to socialized medicine. In a further caustic observation, he remarked that now that research has become fashionable and politically attractive, more and more money is voted each year by Congress for medical research.

Getting down to the meat of the matter, Mr. Brown charged that the crash program in cancer chemotherapy brought to light the danger to the drug industry patent system. Pointing to an official fear in administrative circles that patents will be misused, Mr. Brown charged that this fear was born "mainly of apprehension of congressional criticism."

What are the facts about the cancer chemotherapy program? As this committee well knows, the National Cancer Chemotherapy Service Center has awarded contracts, upon the advice of the most distinguished cancer specialists in this country, to any university, medical school, or industry willing either to screen potential anticancer agents or evaluate existing chemical compounds. It is a completely voluntary program in the sense that any industry which does not choose to apply for a Government contract has no compulsion whatsoever to do so. However, a great number of the large pharmaceutical houses in this country have democratically negotiated and accepted contracts under this program. Conversely, some drug companies have decided not to participate.

As to the patent issue, it has been under negotiation between Government and industrial representatives for almost 2 years. Some of us regard this as a tragic delay, but we have enough faith in the democratic processes and in the good will of industry to hope that it will soon be resolved.

Cancer now strikes approximately 2 out of every 3 American families. It kills 250,000 Americans a year; 1 man, woman, or child every 2 minutes in the United States. Unless we develop effective chemical compounds against its various forms, it will eventually kill 26 million Americans now alive. What is so sinful, then, in a crash program to develop ammunition against this most vicious of killers? Is it moral to develop a crash program for missiles, but immoral to develop a crash program against a monstrous disease?

Some of us who are testifying today have carried the battle for use of the tranquilizing drugs for 5 years in the face of very bitter resistance. We have done so not because we are interested in the profits or the patents of the drug houses, but because we are interested in human life. In a sense, we have protected the right of the pharmaceutical industry to use to the fullest its psychiatric drugs.

But there comes a time when the lines must be drawn. We are not, any of us, against the present free-enterprise system in which pharmaceutical firms indulge in healthy competition for better products. Although no major psychiatric research discovery has been made in America during the past 50 years, we are proud of the role of our pharmaceutical industry in perfecting and marketing the tranquilizing and other drugs. But we say this to Mr. Brown and to the vocal minority of the pharmaceutical industry which criticizes the Congress and the people for demanding an accelerated fight against disease:

You are not an island apart. Your patents are not more precious than human life itself. You have tremendous laboratory and scientific resources. All we are asking you to do is to unite in the common fight against disease. In the biblical sense, all of us must tithe, and industry must tithe too.

It is therefore our fervent hope that this committee will allocate the sum of $5 million for this psychopharmacology drug contract program and that it will include the necessary enabling language in the bill which it reports to the floor.

In the equally important field of the training of psychiatric manpower, the administration has reduced the program below the level of last year's appropriation. The projected allocation of $13,300,000 will obviously allow for no expansion in the training of desperately needed psychiatric personnel.

At the May 1957 meeting of the Advisory Training Committee of the National Institute of Mental Health, training applications in excess of $21 million were received, but less than two-thirds of these applications could be granted because of inadequate funds.

Let us take a specific example of what this cut in training means. Several years ago, the NIMH wisely instituted a cooperative program for the training of potential psychiatric researchers in a broad spectrum of physiological and psychological disciplines. The major purpose of this program is the development of basic research scientists with a broad training, not only in psychiatry, but in anatomy, physiology, sociology, chemistry, etc. Initially grants were made to

two medical centers for this vital work—Albert Einstein in New York City, and UCIA, in Los Angeles. Under this program, 66 young scientists are presently being trained, and 10 departments at each university are cooperating in this exciting endeavor.

For several years, Dr. Felix has wanted to expand this program. It is conservatively estimated that six additional university centers fully competent to inaugurate comprehensive training programs for research scientists could cooperate in this work. However, these grants run about $300,000 to each university, and there is obviously no money in the present budget for any such expansion.

It is most peculiar that the administration is cutting back the training program at just the time when the impact of the accelerated training program of the NIMH over the past few years is beginning to be felt in a positive manner. A report submitted by the NIMH to the Congress this year showed that through fiscal 1956 more than 4,000 psychiatrists, psychologists, social workers, etc., have been trained since the inception of the program. Equally impressive is the fact that more than 70 percent of those trained are presently in full-time public service and the remaining 30 percent spend an appreciable part of their time in public psychiatry.

However, we cannot rest on our oars in the training area. A December 1957 fact sheet from the joint information service of the American Psychiatric Association and the National Association for Mental Health revealed that not 1 of the 48 State mental-hospital systems met the minimum criteria for psychiatric personnel in relation to number of patients. Furthermore, the survey noted the need for approximately 63,000 additional trained people to reach the minimum standards of the APA.

In the light of the above facts, the NCAMI is requesting the modest sum of $21 million for the training programs of the Institute for fiscal 1959.

A year ago, we testified for a special program designed to train the general practitioners of this country in certain psychiatric skills. Although the administration has not seen fit to include any sum for the training of the general practitioner in its current budget, I am happy to inform this committee that the movement to train the family physician in psychiatric skills is probably the most exciting development in psychiatry today.

The American Psychiatric Association now has a full-time psychiatrist in charge of its general practitioners' education project. In addition to preparing a psychiatric handbook for family physicians and working on other educational materials, including sound recordings and films, the APA project director recently completed a noteworthy survey of followup programs for discharged mental patients. Through this survey, he uncovered a number of exceedingly important programs in which the general practitioner is already cooperating with State mental hospitals in the care of discharged patients. In one State a followup program has been initiated by a State medical society; in another, the State academy of general practice has been the pivotal factor, and, in a third, the local mental-health associations have taken the lead. All of this has actually happened within the last year and is impressive evidence of the need for this kind of program. For its part the American Academy of General Practice, the official professional organization of the family physician, has been equally enthusiastic. In the past year, it has approved many State general-practitioner programs for official professional credit. In addition several State academies have held 1- or 2-day training institutes at which prominent psychiatrists have come to talk to their membership.

I recently had the privilege of attending a training institute sponsored jointly by the District of Columbia and Maryland Academies of General Practice. Despite a heavy snowstorm—unusual for our tropical climate—275 very busy general practitioners gave up a full day of practice to attend this training institute.

May I cite another instance of the tremendous interest of the general practitioner in receiving additional psychiatric training? In September 1957 GP, the official publication of the American Academy of General Practice, reprinted the testimony on the general practitioner which I delivered before the House committee on February 27, 1957.

In response to that reprint, I received more than 400 letters from family physicians in all parts of the country asking me how they could qualify for fellowships to receive advanced psychiatric training. Typical of the communications is one from a doctor in Perkasie, Pa. He writes that he is 32 years old, a married man with 4 children, and has been in general practice since 1950, except for 2 years in the Air Force during the Korean war.

"When I graduated from Temple University Medical School in 1948, a future in psychiatry was farthest from my mind," the doctor wrote. "As I became more involved in general practice I found more and more frustration revolving around my inadequacies and ineptness in handling many kinds of psychiatric problems * * *. In brief, then, I have an intense desire to secure more psychiatric training but, frankly, financially cannot, unless a fellowship such as you mention could be procured."

Typical of the willingness of a general practitioner to give up a lucrative private practice in order to obtain more training is the following communication from a family physician in Ballinger, Tex.:

"When you pass this bill to allow the general practitioner some financial support in taking psychiatric training," the doctor wrote with typical Texas optimism, "please let me know. I would gladly sign up for 5 years' work in a mental hospital just to be able to see my way through a psychiatric residency program. As it is now, with heavy family obligations, I am unable to afford the 3- to 5-year training."

In my testimony a year ago before this committee, I pointed out that the average residency stipend of $300 a month was not enough to support general practitioners who wanted to go into psychiatry. I predicted there would be an enormous interest in this program on the part of the general practitioner if the stipend was adequate enough. The many communications I have received are eloquent evidence of the fact that the family physician is eagerly awaiting the development of such a program by the National Institute of Mental Health.

At present, the NIMH has only two fellowships for general practitioners desiring to complete the formal psychiatric residency. It is my hope that the Congress will give the NIMH an unmistakably clear mandate to award training fellowships to general practitioners. The Institute already has the authority to award training fellowships up to a level of $12,000 a year. Furthermore, there are a number of universities and medical schools which have expressed the desire to participate in this program.

Mr. Chairman, we are asking only $1,300,000 for the first year of the general practitioner program. In addition to fellowships, the money would go to pilot projects in methods of training the general practitioner as advocated last year by Dr. Francis Braceland before this committee.

As you know, the House of Representatives, noting that it has seen "little evidence of the kind of bold thinking and action that will be necessary to meet the personnel shortages in psychiatry" earmarked part of the increase it voted for psychiatric training to special projects for the training of the general practitioner. Although this mandate seems quite clear to us, it is apparently not specific enough for the officials of the National Institute of Mental Health. We therefore hope that this committee will spell out in some detail what it wants the National Institute of Mental Health to do in this very vital area.

I don't think I can overemphasize the urgency of this specific proposal. Faced with a critical shortage of psychiatric personnel, we are offered the willing cooperation of the family physicians of this country. Increasingly interested in the problem of mental illness, they now look for leadership to the Congress of the United States in providing a mechanism whereby their vast resources can be added to the fight against mental illness.

In conclusion, Mr. Chairman, the National Committee Against Mental Illness is requesting an appropriation of $55,896,000 for the fiscal 1959 operations of the National Institute of Mental Health. In comparison with the $3,700 million the administration estimates it will spend on scientific research and development during the coming year, it is a very small request indeed.

National Institute of Mental Health

	Fiscal 1958 appropriation	Fiscal 1959 administration estimate	Citizens request
Grants:			
Research grants	$12,402,000	$11,902,000	$15,000,000
Research fellowships	647,000	546,000	1,647,000
Special drug contract program			5,000,000
Training grants	14,000,000	13,300,000	21,000,000
General practitioner training			1,300,000
Grants for detection, diagnosis, and other preventive and control services	4,000,000	4,000,000	4,000,000
Direct operations:			
Research	5,708,000	5,808,000	5,808,000
Review and approval of grants	626,000	591,000	591,000
Training activities	78,000	70,000	70,000
Professional and technical assistance	1,273,000	1,221,000	1,221,000
Administration	483,000	259,000	259,000
Total	39,217,000	37,697,000	55,896,000

INDUSTRIAL DRUG CONTRACT PROGRAM

Mr. GORMAN. I thought I might start with the industrial drug contract program, Senator, because I think it is of some interest to the committee.

Senator HILL. Fine.

Mr. GORMAN. As a separate line item, the NCAMI proposes an additional appropriation of $5 million for the work of the Psychopharmacology Service Center, making a total of $7 million available to the center during fiscal 1959.

During fiscal 1958, the center operated on a budget of $2 million.

On the basis of an enormous increase in applications for drug study and evaluation work from all over the country, the Advisory Council to the center recommended a minimum of $3 million for this program last year. This was not granted, and the fiscal 1959 administration recommendation still holds the center at the $2-million level.

Back in 1955, when we first testified for the creation of a drug program in the National Institute of Mental Health, and Dr. Kline was one of the witnesses, we pointed out that the next few years would probably see a flood of new psychiatric drugs on the market.

Our most sanguine expectations have been exceeded. Today it takes an IBM machine to keep up with the reports in the technical literature on new psychiatric drugs.

Mr. Chairman, this creates an enormous problem for the Psychopharmacology Service Center. Where there were only a few drugs when it was established 2 years ago—the center, that is—there are now more than twoscore of these drugs on the market and many more coming out of the laboratories.

USE OF DRUGS IN PSYCHIATRY

Furthermore, the drugs are still spearheading the remarkable revolution in psychiatry which we first sketched in our 1955 testimony.

Senator HILL. I recall how interesting and may I say how prophetic that testimony was.

Mr. GORMAN. Dr. Kline deserves the major credit for that, sir.

Last December the National Institute of Mental Health released a report which documented the fact that the reductions in State mental

hospital patient loads first noted in 1956 continued through 1957. This national reduction of more than 10,000 patients in those 2 years is equivalent to the entire mental hospital population of Virginia.

The most remarkable feature of this revolution is the almost miraculous increase in discharges. In fiscal 1955, there were approximately 120,000 mental patients discharged from our State institutions; in fiscal 1957 this had risen to approximately 145,000. Put another way, this is an increase of 20 percent in discharge rates during this biennium.

Even more challenging is the fact that this reduction in State mental hospital patients, the first such sustained reduction since 1773, when the first mental hospital was established in Williamsburg in the good Colony of Virginia, occurred in spite of a 10-percent increase in admissions to these hospitals, and a decrease in the death rate of patients in the hospitals.

Because of the demonstrated impact of these drugs upon mental illness, it is all the more emergent that we now mobilize all this Nation's scientific resources in a total effort to accelerate this reduction in hospitalized mental illness.

For that reason, it is our position that the Psychopharmacology Service Center should use the projected additional allocation of $5 million to enter into contracts with the pharmaceutical industry in the same effective manner that the National Cancer Institute has entered into contracts with industry.

Since Dr. Nathan Kline will outline our industrial drug contract proposal in some detail, I would like to make just a few general observations on the role of the pharmaceutical industry in the fight against mental illness.

HOUSE REPORT

The most clear-cut statement of the obligation of the pharmaceutical industry in this area appeared in the House Appropriations Committee report referred to previously in my prepared statement. I quote the pertinent section from that report:

> The committee has not been persuaded that the existing program in psychopharmacology operated by this Institute is fully effective. More vigorous, imaginative and diversified approaches are called for. It does not appear, for example, that there has been a strong and effective effort to enlist the aid of the pharmaceutical industry.
>
> The committee trusts that this program will be more vigorously administered during the coming year. Research on such matters as why and how the new drugs work might well be more effectively stimulated, and the feasibility of systematic screening on a more adequate scale should be explored.

It is important to realize that the drug industry has enormous laboratory and scientific personnel resources at its disposal for this type of work.

RESOURCES OF PHARMACEUTICAL HOUSES

For example, Mr. Chairman, just 2 weeks ago I toured the research laboratories of one of the finest drug houses in the country. I saw there personnel and equipment of a quantity and quality far superior to that of any medical school or university I have visited during the past 13 years.

In the laboratory division of this drug house, there are 125 doctors of philosophy and 95 scientists with a bachelor of science or its equivalent. Available to these scientists is the finest of laboratory

equipment, including several reactors for the synthesis of drug products.

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NEED FOR PROGRAM

Mr. Chairman, there were 1,400,000 people admitted to mental institutions in 1957. Over and above this, it is estimated that several million people were treated in clinics and in private practice.

In the name of these suffering people, and of their families and loved ones, what is wrong with this country availing itself of the tremendous resources of the pharmaceutical industry in the joint fight against this epidemic of mental illness?

When our Department of Defense needs weapons, it goes to our great industrial plants and it offers contract running into the billions, totally, of course, for the production of these weapons. It does not restrict its contract to industry alone—it also contracts with universities for the scientific manpower also needed in the production of weapons.

By the same token, why can't the National Institute of Mental Health contract with whatever agency is best able to produce the most effective weapon or weapons against mental illness?

OPPOSITION FROM PHARMACEUTICAL INDUSTRY

Mr. Chairman, I have been forced into the foregoing remarks because of some of the antiquarian blasts from the pharmaceutical industry which greeted our drug industry contract proposal before the House several months ago.

In his address as retiring president of the American Pharmaceutical Manufacturers Association, Mr. Francis C. Brown, president of Schering Corp., was severely critical of the right of the Congress to determine the level at which medical research should move forward in this country. He accused the Congress, at the behest of "emotional pressure groups," of forcing excessive medical research on the National Institutes of Health and mandating "unwise" research programs.

It was a pretty wide attack, Mr. Chairman. Nobody was left out.

Mr. Brown also attacked the House of Representatives mandate for a "more aggressive" psychopharmacology program as a step toward another crash program in the mental health field. He said this kind of program contained the seeds of "serious dangers" to medical progress and to the "future independence" of the drug industry.

The Congress was not the only branch of Government belabored by Mr. Brown. He criticized National Institutes of Health officials for reporting, during budget hearings, on clinical experience with various drugs.

But he hit hardest at Congress for incorporating these NIH scientific comments in congressional committee reports as "a kind of official judgment of the drugs involved."

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In a further caustic observation, he remarked that now that research has become fashionable and politically attractive, more and more money is voted each year by Congress for medical research.

Getting down to the meat of the matter, Mr. Brown charged that the crash program in cancer chemotherapy brought to light the danger to the drug industry patent system. Pointing to an official fear in administrative circles that patents will be misused, Mr. Brown charged that this fear was born "mainly of apprehension of congressional criticism."

CANCER CHEMOTHERAPY

What are the facts about the cancer chemotherapy program? As this committee well knows, the National Cancer Chemotherapy Service Center has awarded contracts, upon the advice of the most distinguished cancer specialists in this country, to any university, medical school or industry willing either to screen potential anticancer agents or evaluate existing chemical compounds.

It is a completely voluntary program in the sense that any industry which does not choose to apply for a Government contract has no compulsion whatsoever to do so.

However, a great number of the large pharmaceutical houses in this country have democratically negotiated and accepted contracts under this program. Conversely, some drug companies have decided not to participate.

PATENT QUESTION

As to the patent issue, it has been under negotiation between Government and industrial representatives for almost 2 years.

As you know, Senator, the Department of Health, Education, and Welfare has a Patent Policy Committee, I think, chaired by Miss Mary Switzer. They have met a number of times with industry in an attempt to resolve the technical differences.

Some of us regard this 2-year registration as a tragic delay, but we have enough faith in the democratic processes and in the good will of industry to hope that it will soon be resolved.

Cancer now strikes approximately 2 out of every 3 American families. It kills 250,000 Americans a year—1 man, woman or child every 2 minutes in the United States. Unless we develop effective

chemical compounds against its various forms, it will eventually kill, on the basis of our present knowledge of it, 26 million Americans now alive.

What is so sinful, then, in a crash program to develop ammunition against this most vicious of killers? Is it moral to develop a crash program for missiles, but immoral to develop a crash program against a monstrous disease?

Now, Mr. Chairman, this brings me to an even more violent and strident opponent of the right of the Government to take action against these diseases—Karl Bambach, the Washington lobbyist of the American Drug Manufacturers Association.

ATTACK ON GOVERNMENT-SPONSORED RESEARCH

In an incredible speech delivered on May 14 to the Rutgers Pharmaceutical Conference, Mr. Bambach hurled the following rocks at the executive and legislative branches of the United States Government.

I have the text of the speech in front of me, sir.

First, a rarely heard criticism of the action of the United States Congress in providing $55 million in Federal funds for the purchase and distribution of the Salk vaccine to the children in America.

Mr. Bambach, last week, said in his speech and I quote him:

> The final legislation prohibited a so-called means test intended to restrict charity of this kind only to the poor.
>
> To summarize, when Congress wishes, it can direct the purchase and disposal of all or most of the supply of a vitally needed drug * * *. Such actions may represent socialization in the most objectionable and most dangerous sense.
>
> The safest way to administer drugs is under the direction of the private physician; mass immunization program in schools and other public places encourage transmission of infections from one individual to another.

I have never heard this charge before, Mr. Chairman, that infections were produced, and I would like to see Mr. Bambach produce some scientific evidence for that.

In other words, according to Mr. Bambach's reasoning the inoculation of millions of youngsters in school, clinic, and public health programs, was a big mistake, and I guess so was the remarkable reduction in paralytic polio since the Salk vaccine was introduced in 1955.

Senator HILL. The vaccine has certainly brought results.

Mr. GORMAN. Sir, I know that you are much more familiar with this than I am and that the remarkable 80 percent reduction in polio since 1955, particularly in the age groups inoculated, is proof positive, I think, that it has been most effective, and if I may say so, as a citizen and a father of several children, the action by Congress was one of the most enlightened actions by any Congress that I know of.

SALK VACCINE

In discussing the Salk vaccine, Mr. Bambach overlooked an interesting recent development, the indictment by a Federal grand jury in Trenton of five of the largest drug companies in the country which, according to the New York Times, and I quote the New York Times "were charged with monopolizing the production of Salk polio vaccine and fixing prices."

This is interesting because Mr. Brown of Schering and Mr. Bambach and other drug manufacturers make a great noise in their tirades in defense of healthy competition in a free enterprise system.

This has considerable bearing, too, on the present psychopharmacology program. As you know, psychiatric drug sales to State governments, to the Veterans' Administration, and to the United States Public Health Service are very substantial. They run into millions of dollars. Like the Salk vaccine, they are sold on a bidding basis.

HIGH PRICE OF DRUGS

In my tours around the country, I have encountered increasing complaints from State mental health officials on the continued high price of these drugs, particularly the phenothiazine derivatives. Several of these officials suggested that there should be an investigation.

As a former journalist who covered Federal and State courts in my day, I know the difference between an allegation and a finding. However, I think it only fair to the drug industry that there be an investigation.

If these charges are without substance, the drug industry should be cleared. If there is a basis to them, then this is a very serious business.

Frankly, my only interest in the whole matter is the mental patient, and I have been bothered these last several years by the expressed comment of mental hospital superintendents that they hoped the price of these drugs could be reduced so that they could be made available to thousands of patients not getting them now.

It is only fair to state that there have been some price reductions over the past several years, but obviously not enough to satisfy mental health officials. Furthermore, there is another point which bothers me. At several general practice seminars which I have attended recently, a number of general practitioners came to me and asked why the over-the-counter price of these drugs was so many times higher than the price paid by State mental hospitals. They were fully aware of the reductions possible through bulk buying, but they argued that this didn't begin to account for the enormous discrepancy between the price paid by the State mental hospital and the price paid in the drugstore. This, too, is a very serious matter because it directly involves the mental patient who has received the drugs in a mental hospital but then finds it financially impossible to purchase the maintenance dosages of the drug he needs after his discharge.

CRITICISM OF FOOD AND DRUG ADMINISTRATION

Mr. Bambach also indulged in an attack on the Food and Drug Administration's continuance of its Federal certification of all antibiotic manufacture. He said:

> It is high time that the anachronism of Federal antibiotic certification be abandoned.

Again, this is the first time I have seen this type of attack of what I thought was an excellent program of the Food and Drug Administration in assuring the safety of antibiotics. It is a terribly important program.

ATTACK ON INTERNATIONAL GROUPS

Third, Mr. Bambach delivered an attack on the Pan American Sanitary Bureau and the World Health Organization for its long needed and widely hailed study of drug regulatory procedures in all Western Hemisphere countries.

He said:

Through the United Nations and its subsidiary, the World Health Organization, the other nations are exerting a constantly growing influence upon United States thinking in drug regulation. For instance, the Pan American Sanitary Bureau which is part of the World Health Organization is now beginning a comprehensive project of studying regulatory procedures in all Western Hemisphere countries, with the probable objective of recommending methods of making them more uniform.

I cannot see anything wrong with this.

In such international activities, there can be a real threat to the present freedom of the United States Pharmacopeia and the National Formulary from governmental interference and control.

However, the major rock which Mr. Bambach hurls with some vehemence, is an attack on Congress and citizens groups for efforts which "would eventually centralize drug development in the Federal Government's hands."

Again to quote him in all fairness:

Many Members of Congress do not understand this last point—

He was referring to the cancer chemotherapy program and the fact that it was all right for cancer but not for other diseases—

and in fact, they are being misled at times by spokesmen for some of the so-called citizens' groups interested in medical research. These people may be well-meaning—

That is very kind of him—

but they often advocate projects which, if adopted, would decrease the effectiveness of the total research effort, and would eventually centralize drug development in the Federal Government's hand.

We have never had any such intention, sir. We know that all of the research programs have been democratically administered by scientific advisory panels. We know of no case in which the Government has assimilated a single drug house or in any way centralized a drug development.

This is a rather odd accusation, and very irresponsible.

CITIZENS' GROUPS

Later on in his speech, Mr. Bambach refers caustically to the "free-wheeling and self-starting spokesmen for these organizations." That is the citizens' groups.

In this category, I presume he includes Drs. Paul Dudley White, Isidor Ravdin, Sidney Farber, Cowles Andrus, Dr. C. P. Rhoads, Dr. William Menninger, and the scores of the Nation's most distinguished scientists who have come to Washington at their own expense over the past 10 years to express their views on this democracy's role in the fight against the killing and crippling diseases.

This is the most unfair and unfounded accusation by Mr. Bambach, and strangely enough, it comes from the lobbyist for the drug in-

dustries, the self-same pharmaceutical houses which have fattened on record profits in the postwar years.

I would like to assure Mr. Bambach that I am not against profits, but I think it comes ill of him to accuse others.

OPPOSITION TO CANCER CHEMOTHERAPY AS PROTOTYPE PROGRAM

In a separate communication Mr. Bambach endorses the present cancer chemotherapy program, that is; the industrial contract program, but he says he does not want it used as a prototype in any other disease areas.

Discussing the proposed industrial drug program in psychiatry, he writes, and I quote him again:

> Above all, we now have a number of good psychotherapeutic drugs, but there are no known antitumor drugs for humans.

When I first read it, I questioned it, and I read it three times. In the first place, I believe he is completely incorrect in asserting there are no known antitumor drugs for humans.

On May 16, this committee heard Drs. Farber and Ravdin describe a number of drugs, many of them on the commercial market, which are effective agents in the regression of tumors. In fact, Dr. Ravdin showed the committee pictures of successful tumor regresses.

In a further effort to find out, I called Dr. Farber on Sunday, Mr. Chairman. Dr. Farber said that he knew of a number of effective antitumor agents which were on the commercial market today and that some of these had been produced with the aid of the Federal Government.

This I regard as terribly important, that they were produced with the aid of the Federal Government.

So I think Mr. Bambach's statement does not hold any water and he does not give credit to the Federal Government for the production of some of these very antitumor drugs which are keeping alive, in many cases, patients for as much as 4 or 5 years.

Dr. Farber, I think, presented 1 case of a boy, and he was kept alive 8 years and 2 months, totally on a variety of chemical compounds.

All of these cancer witnesses testified as to the need for additional funds to hasten the development of more effective anticancer agents.

GOVERNMENT'S INTEREST IN MENTAL ILLNESS

By the same token, the Government has an interest in the development of more effective agents against mental illness. For example, the drug industry argues that it is producing an enormous number of compounds useful against mental illness. But is it not true that many of these compounds are little different than their predecessors, and that most of them are designed for the neurotic who can pay for them?

How about the 4 million mental defectives in this country? They are not much of a commercial market, but should we not be interested in the development of compounds which may be effective in various kinds of mental deficiencies?

Mr. Chairman, as a science writer for a number of years, I really do not understand the hysteria of the drug companies. I do know this, though: Several drug companies have complained to me that the

evaluation of cancer compounds by the National Cancer Service Center—and Dr. Ravdin is chairman of that clinical study panel—is an infringement of the sacred right of private enterprise.

REASON FOR INTEREST IN CANCER

Why, they argue, should a group of federally appointed scientists decide what anticancer compound is effective against a certain type of cancer? My answer, sir, is a very simple one—because human life is at stake, and many lives can be saved if the busy family physician can be informed of the relative effectiveness of one compound as against another, and he can be informed by scientists of the caliber of Sidney Farber and Isidor Ravdin and others.

By the same token, suppose 2 or 3 vaccines had been developed against polio. Would the drug industry argue that the NIH had no right to step in and decide which compound would save the most children from developing paralytic polio? I do not think they would.

True, if one compound is chosen as the most effective or more effective, other manufacturers of similar compounds may suffer in their pocketbooks. If the Department of Defense chooses the weapons of one manufacturer as against those of the competitors, the competitors suffer. This is all right for national defense, but the same system is taboo when we come to the savings of human life.

I just cannot see the full logic of that, Mr. Chairman.

Some of us who are testifying today have carried the battle for use of the tranquilizing drugs for 5 years in the face of very bitter resistance.

We have done so not because we are interested in the profits or the patents of the drug houses, but because we are interested in human life.

I plead guilty in being for human life.

In a sense, we have protected the right of the pharmaceutical industry to use to the fullest its psychiatric drugs.

But there comes a time when the lines must be drawn. We are not, any of us, against the present free enterprise system in which pharmaceutical firms indulge in healthy competition for better products; that is, if the competition is healthy.

ROLE OF PHARMACEUTICAL INDUSTRY

Although no major psychiatric research discovery has been made in America during the past 50 years, we are proud of the role of our pharmaceutical industry in perfecting and marketing the tranquilizing and other drugs. But we say this to Mr. Brown and to the vocal minority of the pharmaceutical industry which criticizes the Congress and the people for requesting an accelerated fight against disease:

You are not an island apart. Your patents are not more precious than human life itself. You have tremendous laboratory and scientific resources. All we are asking you to do is to unite in the common fight against disease.

In the biblical sense, all of us must tithe, and industry must tithe too.

It is therefore our fervent hope that this committee will allocate the sum of $5 million for this psychopharmacology drug contract program and that it will include the necessary enabling language in the bill which it reports to the floor.

TRAINING PSYCHIATRIC MANPOWER

In the equally important field of the training of psychiatric manpower, the administration has reduced the program below the level of last year's appropriations. The projected allocation of $13,300,000, which is the administration's figure, will obviously allow for no expansion in the training of desperately needed psychiatric personnel.

QUESTIONS ON HOUSE ACTION

Senator HILL. Before we leave that item, I notice the House raised the budget estimate by $2,700,000.

Mr. GORMAN. Yes, sir.

Senator HILL. Was any of that raise for the psychopharmacology program or for other activities?

Mr. GORMAN. Sir, not specifically for the psychopharmacology program. They did make a statement that they wanted a more aggressive program with the pharmaceutical industry.

Senator HILL. You read that.

Mr. GORMAN. Yes, sir. But in the specific allocation there was no direct sum given to the psychopharmacology service center, if that answers your question, Senator.

Senator HILL. All right, sir.

Mr. GORMAN. At the May 1957 meeting of the Advisory Training Committee of the National Institute of Mental Health, training applications in excess of $21,000,000 were received, but less than two-thirds of these applications could be granted because of inadequate funds.

I will skip over some of the testimony in my prepared statement with regard to training programs which have to be cut, including the important work in training potential psychiatric researchers in a broad spectrum of physiological and psychological disciplines.

This is a program very close to the heart of Dr. Felix, and I know he is inhibited at the present time by budgetary restrictions.

We cannot rest on our oars in the training program. A December 1957 fact sheet from the joint information service of the American Psychiatric Association and the National Association for Mental Health revealed that not one of the 48 State mental hospital systems met the minimum criteria for psychiatric personnel in relation to number of patients.

Furthermore, the survey noted the need for approximately 63,000 additional trained to reach the minimum standards of the APA.

Senator Thye, I was just discussing the training grant program of the administration. I am on page 11 of my prepared testimony.

Senator THYE. Mr. Chairman, I regret exceedingly that I was not here at the outset of Mr. Gorman's statement. I did appear before the Public Works Committee relative to some projects in Minnesota, and they were hearing witnesses, not just myself and other Senators this morning. I am a member of that subcommittee.

Senator HILL. I may say, as we know, no one is more interested in this matter of mental health than Senator Thye. He has demonstrated that time and time again. Our great problem today is how to be at two places at the same time.

In a few minutes, I am going to have to excuse myself and I hope only for a few minutes time to go to another meeting, and I will come

right back. I hope you gentlemen understand. It is not my wish. I will make it as brief as I can and come right back.

NUMBER OF APPLICATIONS EOR TRAINING

Mr. GORMAN. Senator Thye, I was starting on page 10. I was making the observation that the training applications in excess of $21 million were received by the National Institutes of Health in 1957, but less than two-thirds of these applications could be granted because of the inadequate funds.

I skipped over, sir, to page 11, and made the observation down at the second paragraph that we cannot rest on our oars in the training program.

NEED FOR TRAINED PERSONNEL

A December 1957 fact sheet from the Joint Information Service of the American Psychiatric Association and the National Association for Mental Health revealed that not 1 of the 48 State mental hospital systems meet the minimum criteria for psychiatric personnel in relation to number of patients.

Furthermore, the survey noted the need for approximately 63,000 additional trained people to reach the minimum standards of the APA.

In the light of the above facts, the NCAMI is requesting the modest sum of $21 million for the training programs of the Institute for fiscal 1959.

Senator THYE. That is, primarily for training of personnel and facilities that would be required to train the personnel?

Mr. GORMAN. It is two sets of grants.

EXAMPLE OF PSYCHIATRIC HELP

Senator THYE. You know, Mr. Chairman, that last fall I was attending a hearing out in one of the Western States, a committee hearing, and I spent a few hours in the evening with a very close friend of mine. His wife had been ill. She had been committed to several hospitals for observation.

They feared a brain tumor. They had some of the noted brain specialists there. I said, "Why don't you take the girl to Rochester for a complete physical checkup from every conceivable manner?"

It was a nerve condition bordering on a mental problem. A special study in the psychiatric field brought about the understanding and the correction, and the woman is perfectly normal and enjoying life just exactly as any normal person would.

They doctored her for several years, and all she was praying for was to die.

That is why, Mr. Chairman, I hold so strongly to the idea that this field of research has just scratched the surface, whether it is mental health, cancer, heart, or any of the diseases of the human body.

The mental question is a disease just as positive as smallpox or any other ailments that you can see on the surface.

Therefore, I appreciate your positive statement, Mr. Gorman, this morning.

If it had not been for the persons working in the field bringing it to the light of public attention and endeavoring to get appropriations to bring about corrections, you would never have been successful,

because you have to have public opinion with you. If public opinion is not with you, you cannot obtain the funds nor can you bring about the changes in the institutional buildings as well as in the equipment and the facilities.

So, therefore, you have rendered a service. Your speaking has been just as effective as the specialists who are qualified to do the research and the work in the research labs.

Senator HILL. In other words, Senator, it takes a team, does it not?

Senator THYE. Yes, it does.

Mr. GORMAN. I once had a managing editor, Senator, when I was a political reporter. I guess I was a pretty good one, not the greatest. I got interested in this field. He said, "Mike, why are you interested in all of these nuts?" "Mr. Managing Editor, they are a part of the human race. When I have convinced you, and you are one of the toughest, then I will have convinced the people of Oklahoma," I told him.

TRAINING GENERAL PRACTITIONERS

A year ago, we testified for a special program designed to train the general practitioners of this country in certain psychiatric skills. Although the administration has not seen fit to include any sum for the training of the general practitioner in its current budget, I am happy to inform this committee that the movement to train the family physician in psychiatric skills is probably the most exciting development in psychiatry today.

It is the most exciting I have seen in the last 10 years.

I recently had the privilege of attending a training institute sponsored jointly by the District of Columbia and Maryland Academies of General Practice. Despite a heavy snowstorm—unusual for our tropical climate—275 very busy general practitioners gave up a full day of practice to attend this training institute, to learn more about the treatment of the mentally ill patient.

May I cite another instance of the tremendous interest of the general practitioner in receiving additional psychiatric training? In September 1957 GP, the official publication of the American Academy of General Practice, reprinted the testimony on the general practitioner which I delivered before the House committee on February 27, 1957.

In response to that reprint, I received more than 400 letters from family physicians in all parts of the country asking me how they could qualify for fellowships to receive advanced psychiatric training.

Typical of the communications is one from a doctor in Perkasie, Pa. I do not know where it is, but that is where the letter was postmarked.

He writes that he is 32 years old, a married man with 4 children, and has been in general practice since 1950, except for 2 years in the Air Force during the Korean war, and I quote from him:

> When I graduated from Temple University Medical School in 1948, a future in psychiatry was farthest from my mind—

the doctor wrote—

> As I became more involved in general practice I found more and more frustration revolving around my inadequacies and ineptness in handling many kinds of psychiatric problems.

In brief then, the doctor wrote—

I have an intense desire to secure more psychiatric training but, frankly, financially cannot unless a fellowship such as you mention could be procured.

And that ends the quote from the doctor from Perkasie, Pa.

Typical of the willingess of a general practitioner to give up a lucrative private practice in order to obtain more training is the following communication from a family physician in Ballinger, Tex.

When you pass this bill to allow the general practitioner some financial support in taking psychiatric training—

the doctor wrote with typical Texas optimism—

please let me know. I would gladly sign up for 5 years' work in a mental hospital just to be able to see my way through a psychiatric residency program. As it is now, with heavy family obligations, I am unable o afford the 3-to-5 years' training.

NEED FOR LARGER STIPENDS

In my testimony a year ago before this committee, Senator Thye, I pointed out that the average residency stipend of $300 a month was not enough to support general practitioners who wanted to go into psychiatry, because most of them are in the thirties and forties and have had Army service and have accumulated a family.

I predicted there would be an enormous interest in this program on the part of the general practitioner if the stipend was adequate enough.

GENERAL PRACTITIONER'S TRAINING PROGRAM AWAITED

The many communications I have received are eloquent evidence of the fact that the family physician is eagerly awaiting the development of such a program by the National Institute of Mental Health.

At present, the Institute has only two fellowships for general practitioners desiring to complete the formal psychiatric residency. Both of them are in the University of Utah Medical School. They are receiving training there.

It is my hope that the Congress will give the NIMH an unmistakably clear mandate to award training fellowships to general practitioners. The Institute already has the authority to award training fellowships up to a level of $12,000 a year.

Furthermore, there are a number of universities and medical schools which have expressed the desire to participate in this program.

The University of Nebraska, where I recently spoke, is desirous of developing a strong program. I think they want their general practitioners to do a good part of the job of treating mental illness.

We are asking only $1,300,000 for the first year of the general practitioner program. In addition to fellowships, the money would go to pilot projects in methods of training the general practitioner as advocated last year by Dr. Francis Braceland before this committee.

HOUSE EARMARKS FUNDS FOR PROGRAM

As you know, the House of Representatives, noting that it has seen "little evidence of the kind of bold thinking and action that will be necessary to meet the personnel shortages in psychiatry" earmarked part of the increase it voted for psychiatric training to special projects for the training of the general practitioner. It earmarked money on the House side for the training program.

Although this mandate seems quite clear to us, it is apparently not specific enough for the officials of the National Institute of Mental Health. We therefore hope that this committee will spell out in some detail what it wants the National Institute of Mental Health to do in this very vital area.

APPROPRIATION REQUESTED

In conclusion, Mr. Chairman, the National Committee Against Mental Illness is requesting an appropriation of $55,898,000 for the fiscal 1959 operations of the National Institute of Mental Health. In comparison with the $3,700 million the administration estimates it will spend on scientific research and development during the coming year, it is a very small request indeed.

BREAKDOWN OF REQUESTS

On the final page, Senator Thye, I have included a breakdown, sir, of our specific requests by line item.

Senator THYE. I note that. You have research grants, you have your citizens' request, which is for $15 million.

Mr. GORMAN. Yes, sir.

Senator THYE. And the various items are broken down.

Mr. GORMAN. Yes, sir; as against the administration's budget.

Senator THYE. That is right. Your appropriation for fiscal 1958 was $12,402,000, and for 1959 the estimate was $11,902,000, but your citizens' request is for $15 million.

Mr. GORMAN. You see there was actually a reduction of $500,000 between the 2 years.

Senator THYE. Yes; I recognize that.

Mr. GORMAN. I do go into that in the beginning of my statement.

I am going to stop now and turn this over to the most able doctors on my right, but I would like to quote something from the beginning of my statement which I have not read.

BACKLOG OF APPROVED RESEARCH REQUESTS

A year ago Dr. Robert H. Felix, who is the Director of the National Institute of Mental Health, appeared before this committee and pointed out that he was running into a backlog of approved research requests which could not be granted because of lack of funds.

The present reduction—from $12,402,000 in fiscal 1958 to $11,902,000 in fiscal 1959—will pile up a further backlog of research requests.

We think this is somewhat of a disaster.

LETTER FROM MR. KARL BAMBACH

(The following letter, with accompanying enclosure, was later received by the committee from Mr. Karl Bambach, executive vice president of the American Drug Manufacturers Association, and is printed in compliance with Mr. Bambach's request:)

AMERICAN DRUG MANUFACTURERS ASSOCIATION,
Washington, D. C., May 20, 1958.

Hon. LISTER HILL,
Chairman, Committee on Labor and Public Welfare,
United States Senate, Washington, D. C.

MY DEAR SENATOR HILL: Several people have informed me that Mr. Mike Gorman severely criticized a speech of mine during the hearing yesterday before your committee on the appropriation for the National Institute of Mental Health. I thought it would be advisable to send you a copy of my entire speech so that you could judge it for yourself. It was presented on May 14 at the Rutgers Pharmaceutical Conference.

I hate to ask you to take time from your busy day to read this statement, but I do think my speech, which was really intended for pharmacists and pharmacy students, speaks for itself. My comments on medical research appear from the bottom of page 4 on. They are no different in substance from those I made to you personally and in my recent letter to you. Since I was apparently rather freely discussed yesterday, you are free to insert this letter and the enclosure in the record of the hearing if you deem it advisable.

As I understand it, we are all working toward the same end: the stimulation of as much effective medical research as possible.

The reason many research authorities, including some at NIH, as well as in the pharmaceutical industry, do not favor an industry-Government contract program to produce even more tranquilizing drugs is that they fear the net result would harm the total research effort of the country. The pharmaceutical industry would prefer to carry out such research with its own money. Is it so wrong for someone to prefer to spend his own money, and not want to use government money in these areas?

What is needed, as urged in my letter of March 17 to you, is ample support of basic research. The best way to do this is through research grants with university and other investigators, which the NIH grant program has been carrying out for many years.

The specific recommendations made by Dr. Nathan Kline in his testimony before you yesterday, in my personal opinion, would not harm the total research effort, and might have beneficial results. You will note, however, that Doctor Kline was quite specific in his recommendations, which were constructive in nature.

I wish that I could talk these important matters over with you when the opportunity permits. Perhaps when I return to Washington, after my trips to two association meetings, you would be good enough to grant me another interview.

With best personal regards,

Respectfully yours,

KARL BAMBACH,
Executive Vice President.

THE WASHINGTON SCENE AND THE DRUG INDUSTRY

Presented at the Rutgers Pharmaceutical Conference, New Brunswick, N. J., May 14, 1958, by Karl Bambach, executive vice president, American Drug Manufacturers Association

One of the rewarding things connected with a career in the drug-manufacturing industry is the close contact it gives with the academic world. Being invited to participate in the Rutgers Pharmaceutical Conference is a good example of this kind of reward, and I am delighted to be here.

It is easy to see why the pharmaceutical field keeps one in close touch with the halls of learning. An unusually large proportion of drug-industry executives are college graduates, many with advanced degrees, and they often retain their collegiate interest in academic subjects. Above all, the pharmaceutical manufacturing industry lives and grows on research, which inevitably draws it down the ivy-covered, not the primrose, path. More than any other large industry, ours invests a substantial portion of its total sales in the support of research.

While my subject today uses the name of the city in which I live, it really has reference to the Federal Government. There are 3 main areas where the Federal Government exercises a direct and specific influence upon the drug industry: (1) purchase of drug products; (2) regulation of the industry and trade; and (3) support of medical research. I shall discuss these in turn.

Perhaps the easiest item to handle of the three I have just named is the one on governmental drug procurement. Here the Federal Government is a customer, purchasing supplies usually by going through a bidding procedure. During peacetime, the magnitude of drug purchasing by Uncle Sam is not overwhelming, amounting to approximately $50,000,000 a year. About 40 percent of this is spent by the Veterans' Administration, and a little more than one-half by the Defense Department. In times of national emergency, as those of us who were in the drug supply field during World War II can testify, the picture changes materially. It does not, however, take a war to bring about this change: just recall the Salk poliomyelitis vaccine episode.

As soon as the favorable report on the vaccine was given wide publicity, certain elements on Capitol Hill and in New York City urged that the product be socialized in some way. Some advocated governmental control of distribution and price; others wanted the Federal Government to purchase all the vaccine produced and give it away. The final congressional decision was to provide Federal funds to purchase enough vaccine to immunize one person out of every three in the age group susceptible to poliomyelitis; actually, some $55,000,000 were used for this purpose.

During the debate on Capitol Hill a major issue arose concerning the furnishing of "free" vaccine only to those unable to pay for it. Any limitation of this kind was bitterly opposed by the group which favors broader governmental powers generally. The final legislation prohibited a so-called means test intended to restrict charity of this kind only to the poor. Thus we witnessed complete abandonment of the traditional principle that charitable services and supplies are to be made available to those unable to pay, but not to the wealthy. In fact, in many communities parents preferring to pay to have polio vaccine administered to their children by their private physicians were not able to do so for a long time, because all available supplies of vaccine had been purchased by the Government and were being distributed through charity channels.

Although in this talk I was able to dismiss in a few words the ordinary procurement of drugs by the Government, it took many more words to describe what extraordinary procurement can mean. To summarize, when Congress wishes, it can direct the purchase and disposal of all or most of the supply of a vitally needed drug. This bypasses the pharmacist, the wholesaler, and often the family physician. Such actions may represent socialization in the most objectionable and most dangerous sense. Dangerous, not only to our traditions of freedom, but dangerous to the public health. The safest way to administer drugs is under the direction of the private physician; mass immunization programs in schools and other public places encourage transmission of infections from one individual to another.

The second topic of the trio named earlier is the one the drug trade lives with from day to day: Government control and regulation. As everyone here knows there are special laws regulating the quality, strength, purity, distribution, and administration of drugs. These laws operate on local, State, and Federal levels. They are all intended to benefit the public health and welfare. The responsible factors in the manufacturing industry, the wholesale and retail drug trade and the medical and pharmacy professions also operate in the public interest. Even though private businesses are involved, there is a strong regard for the public health and safety in these commercial and professional operations. In addition to specific laws controlling the drug trade, there are the general business regulatory statutes: antitrust laws, unfair competition measures, labor laws, security requirements, and all the tax statutes which vex the business world. We shall, of course, devote our attention to the particular laws which deal with drugs and not with business generally.

I do not intend to delve into the details of the numerous drug regulatory laws in my talk before the Rutgers pharmaceutical conference. Many of you are better acquainted with these laws than I am. My comments will be limited to some general observations.

With few exceptions, the statutes regulating the manufacture, distribution, and dispensing of drugs follow the basic American principle of defining the individual citizen's responsibility, and expecting him to observe it. Those who do not carry out their responsibilities are subject to legal action. However, it is important to keep in mind that in most instances each person is first given a chance to live up to his statutory responsibilities.

It works like this: Anyone can legally enter the manufacturing, wholesaling, or retailing drug business. However, there are certain requirements he must meet, and certain requirements his product must meet. I often use, as an illustration,

the ordinary traffic laws. We are permitted to drive automobiles freely, as long as we have met certain legal requirements, and as long as we observe certain rules of behavior. The laws do not insist that a Government agent should sit next to each driver, to make sure that he obeys the law.

Previously, I referred to some exceptions to this general principle. The laws covering biological products, insulin, and certain antibiotics illustrate these exceptions. Here the Government has a lot to say about who shall enter the business, and it decides which production batches can legally be distributed. In these cases, it is as if a policeman is sitting next to each automobile driver. These particular requirements are not consistent with our traditional policies of individual freedom. We should be eternally vigilant so that future drug laws follow the rule, and not the exception.

At this point I wish to make clear the fact that there are logical reasons for some of the nontypical control laws, such as the Virus, Serum, and Toxin Act. However, logical reasons do not, in my opinion, apply today with equal force to the requirement that the Government certify each batch of penicillin, chlortetracycline, chloramphenicol, streptomycin, and bacitracin, and their derivatives. There is no longer any reason for the Food and Drug Administration to serve as the centralized quality control laboratory for all the manufacturers of the antibiotics I have named. At the close of World War II, when the penicillin amendment was passed, Mr. Watson Miller, who was then Federal Security Administrator, sent a letter to Congress on behalf of the Food and Drug Administration describing the Government's position on this extension of regulatory powers. This statement gives a clear impression that the Government intended to exempt penicillin from the batch certification requirement when production and quality control procedures were adequately developed, and when sufficient scientific knowledge of the antibiotic had been obtained. At present, scientific knowledge of penicillin is more complete than that of most drugs. Its structural formula is known; its production is routine and precise; its medical behavior is well understood; its purity and strength are accurately controlled. Yet each batch of most dosage forms of penicillin must today go through the routine of Government testing and certification, even though many antibiotics and all other drugs marketed in recent years are not tied to this requirement. It is high time that the anachronism of Federal antibiotic certification be abandoned.

I must not dwell upon the peculiarities and inconsistencies of present drug laws to the neglect of their good features. The United States enjoys the widest distribution of the finest pharmaceuticals of any country in the world. Much of this is due to the wisdom with which our drug laws have been drafted and are administered. These laws provide adequate freedom for the imaginative, responsible manufacturer and distributor, yet they furnish protection for the public against irresponsible and predatory elements.

The Food and Drug Administration, the National Institutes of Health, and the Bureau of Narcotics wisely administer the laws for which they are responsible. These agencies serve the best interests of the public. The drug industry, the laws, and the regulatory agencies work together to provide an excellent illustration of Robert Frost's definition of freedom: "Moving easy in harness."

A vital factor in the regulation of pharmaceuticals is the development of proper standards of strength, quality, and purity. Here again the United States has a truly remarkable system. The responsibility for working out standards and methods of analysis is largely vested in private citizens, not in Government officials. If you will look at the way other countries do this, you will find that we are indeed unique. The official standards for drugs, as defined by the United States Pharmacopeia and the National Formulary, are the results of the efforts of scientists in all walks of life. Some Government scientists sit on United States Pharmacopeia and National Formulary committees, but in this work they serve as private citizens.

Our procedure is far different from that of other nations, where the central government sets the standards for drugs, decides what methods shall be used in analyzing them, decides who shall receive licenses to make and sell them, and in many instances the government actually manufactures them. Through the United Nations and its subsidiary, the World Health Organization, other nations are exerting a constantly growing influence upon United States thinking in drug regulation. For instance, the Pan American Sanitary Bureau, which is part of WHO, is now beginning a comprehensive project of studying regulatory procedures in all Western Hemisphere countries, with the probable objective of recommending methods of making them more uniform.

In such international activities, there can be a real threat to the present freedom of the United States Pharmacopeia and the National Formulary from govern-

mental interference and control. I emphasize this point because the maintenance of the United States Pharmacopeia and National Formulary in their current status is of vital importance to everyone in the pharmaceutical and medical field. No pharmacist, physician, drug wholesaler, or manufacturer should ever forget that this is of great concern to him.

Let us go back to antibiotic certification for a moment, for this provides a wonderful illustration of what happens when the Federal Government has the legal right to set drug standards and prescribe methods of analysis. I looked at the FDA compilation of tests and standards for antibiotics the other day. These impressive volumes, for a few antibiotics only, are thicker than the United States Pharmacopoeia and National Formula combined. Yet the latter compendia give the necessary information for all other official drugs, including several uncertified antibiotics. I predict that if the Government is ever given powers over all drugs similar to those covering the five certifiable antibiotics and their derivatives, the material now adequately contained within the conservative covers of the United States Pharmacopoeia and National Formula would be expanded to exceed Dr. Eliot's 5-foot shelf.

We have now reached the third and last area of governmental impact upon the pharmaceutical industry and profession: the sponsorship of medical research. Some of you may wonder why this is a significant factor. The extent of its significance depends upon its magnitude and upon the course it takes.

The magnitude of Federal support is tremendous. Prior to World War II, the United States Government financed less than one-tenth as much medical research as it does today.

In 1957, the pharmaceutical industry spent $127 million for medical research, including drug development. The National Institutes of Health budget was something over $200 million, and other Government agencies spent substantial amounts on medical research projects. Although the universities, the States, and private foundations are supporting medical research generously, it is safe to conclude that more than one-half of all medical research in the United States today is financed in someway by the Federal Government.

The power of the purse carries with it the power to control. So far, there has been little tendency on the part of the National Institutes of Health, which is the leading medical research agency, to direct the course of the research it finances. It is the firm policy of the National Institutes of Health to exercise a minimum of governmental control, and in large measure the laws under which the agency operates recognize this principle.

Another policy of National Institutes of Health is to favor basic research, feeling that applied research and drug development are the proper functions of private organizations. It is important that this distinction be maintained, for two reasons. First, industrial research must necessarily emphasize the applied or developmental type. The drug industry carries out quite a lot of basic research, but it cannot justify undue emphasis upon search for basic facts without known commercial application. Therefore, if the Government does not provide the necessary emphasis upon basic research, this vital factor will be neglected in the Nation's total effort.

Second, applied research has for its main goal the development of new products, and if the Government throws its tremendous monetary weight into applied research in a specific medical area, industry must inevitably withdraw from that field. The chances of making an industrial invention which will pay for the research expenditure become quite remote when the Government takes over the financing of most of the projects. Consequently, the healthy competition which comes from applied research supported by many independent sponsors disappears, and the commercial impetus to bring out a worthy new product is greatly diminished.

When one considers these complicated factors, it becomes obvious that the proper balance is reached if the Government's program emphasizes basic research. Privately supported programs can stress applied research and development, but should include as much sponsorship of basic projects as possible.

Until the past 2 or 3 years, this was the case generally, in the medical research field. The trend toward Government sponsorship of drug development began with the project in cancer chemotherapy. In an attempt to find drugs with antitumor activity, Congress directed National Institutes of Health to begin a comprehensive screening and testing program. A Cancer Chemotherapy National Service Center was established by National Institutes of Health to carry out this applied research project, and I think most of you are familiar with its operations.

The drug industry is cooperating fully with the Service Center, and there are

even some Government-industry grant programs underway. Because no satisfactory drugs for the cure of cancer are known today, and because there had been relatively little industrial research in that field, the net result of the Government's venture in finding antitumor drugs has been to increase the total research effort. These same conclusions, however, would not fit many other medical areas. The cancer chemotherapy program definitely should not be used as a pattern to be applied to fields where good drugs already exist, and where intensive company research is going on.

Many Members of Congress do not understand this last point, and in fact they are being misled at times by spokesmen for some of the so-called citizens' groups interested in medical research. These people may be well-meaning, but they often advocate projects which, if adopted, would decrease the effectiveness of the total research effort, and would eventually centralize drug development in the Federal Government's hands.

Governmental drug development programs have been, or are being, proposed in the mental health field, in heart disease, and in virology, to name only a few of the medical areas involved. The technical facts which provide some justification for the program in anticancer drug development certainly do not apply here. For example, there are good tranquilizing drugs on the market today, and private sources are supporting many active drug development and drug screening projects in the mental health field. Similarly, industrial and other private research organizations are making great strides in treating heart ailments, metabolic diseases, gladular disorders, virus infections, and most other illnesses. The support the Government gives to research in these medical categories should be directed toward study of basic mechanisms, causes of illness, diagnostic techniques, and all those things which increase our store of fundamental knowledge.

Some of the spokesmen for the so-called citizens' groups, which I recently referred to, are really professional lobbyists. Their proposals are often sound, of course, for they usually request adequate appropriations for National Institutes of Health to support basic medical research. It is when they urge that Congress direct National Institutes of Health to spend specific sums for drug development and comparative drug evaluation in medical fields where good drugs already exist, that their efforts could be really harmful to ultimate medical progress.

Well, what can one do to correct this situation? It isn't a simple problem. I often wince when I contribute to this medical fund or to that one, realizing that a small percentage of my own contribution will go to cover the expenses of someone advocating an unwise program for the Government to follow. Individuals on the governing boards of these groups should be contacted and kept informed of what their agents are doing. The freewheeling and self-starting spokesmen for these organizations should be required to clear their proposed statements with their supporters before being presented to the Congress.

Another thing which knowledgeable people in the pharmaceutical field can do is to make sure that their Senators and Congressmen are told all of the facts. Members of Congress cannot in themselves be authorities on everything, and they must depend upon the opinions of experts. They do not necessarily realize how important it is for the Federal Government to give National Institutes of Health a free hand to support as much basic research as its scientists feel desirable. Nor would they be likely to think about the adverse effects of having the Government take over the drug development functions of industry, unless it is pointed out to them.

I have attempted to describe the three areas where the Government has a decided and specific impact upon the drug industry. In closing, I would like to point out that there is a common thread running through all these problems. It is this: There is a proper place in the pharmaceutical field for the efforts of Government, and there is a proper place for the efforts of private citizens. Each can strengthen the other; neither one need cause harm to the other. When the efforts of Government strengthen those of its citizens, the Nation as a whole is made stronger. Without doubt this was the intention of those who set forth the basic principles in our Constitution more than 165 years ago; it was the intention of those who recognized the responsibilities of private citizens in manufacturing and distributing drugs, and in establishing standards for them, in the food and drugs act 50 years ago; and it was the intention of those who saw the need for more support of basic medical research in setting up the first National Institute of Health about 20 years ago.

These wise intentions should not be overlooked. It should be our purpose today, and our responsibility as citizens, to see that a healthy balance is maintained between the functions of Government and those of private organizations

in all facets of medicine and pharmacy. The tremendous amounts of money which the Federal Government has to spend should be carefully directed in its procurement of drugs, its regulatory activities, and its support of medical research. It is always the citizen's responsibility to chart the Government's course.

Mr. GORMAN. That concludes my observations, sir, and Mr. Chairman, I would now like to turn to Dr. Nathan Kline, whom this committee has heard before and who will talk on the industrial drug contract program.

Senator HILL. Fine, we would be delighted to hear from you now, Doctor.

ROCKLAND STATE HOSPITAL, ORANGEBURG, N. Y.

STATEMENT OF DR. NATHAN KLINE, DIRECTOR OF RESEARCH; ALSO ASSISTANT CLINICAL PROFESSOR OF PSYCHIATRY, COLUMBIA UNIVERSITY; NEW YORK CITY, N. Y.

TRANQUILIZING DRUGS

Dr. KLINE. Mr. Chairman and members of the committee, when chlorpromazine and reserpine were first introduced for the treatment of mental illness a brief 5 years ago, there was widespread skepticism because there never had been preparations which could effectively alter the course of these diseases on a large scale, and it was inconceivable to some that such drugs had really been discovered. Others argued against the use of such medications since there was no place for them in their theories of the origin and treatment of mental diseases.

The most vocal skeptics were those who had not used the pharmaceuticals at all or those who had tried them in inadequate doses for inadequate periods of time.

On the other hand there were experienced clinicians and researchers who used the drugs and, despite initial skepticism, did not find them wanting in the balance.

Because of the tremendous changes such effective agents would have in dealing with the Nation's No. 1 public health problem there was still, a year after their introduction, acrimonious and bitter debate as to whether they did anything that sugar tablets would not do.

It was at this juncture that I had the opportunity of presenting to the present committee the early evidence that these drugs were an important and new contribution to the medical field.

Being without rancor or prejudicial preconception this committee decided that the drugs were at least worthy of investigation. To this end you recommended a $1 million appropriation with which a nationwide evaluation could be carried out and another $1 million to be used for individual detailed but related studies.

For whatever reason the large-scale investigation was never carried out and there were unfortunate delays in getting the whole program underway. Perhaps those responsible felt that the claims to usefulness of these drugs were unjustifiable and by delaying action the excitement would die away and the funds could be used for other purposes, more useful.

EFFECT OF DRUGS ON DISCHARGE RATE

Although the systematic demonstration of the effectiveness of the drugs by means of the proposed nationwide evaluation was not done, nevertheless the action of this present committee served greatly to encourage the legislatures of various States to appropriate many times the $2 million voted by Congress, for the application of the drugs within the State hospitals.

As indicated in my testimony last year, and as indicated by Mr. Gorman, in the State of New York, where the drugs were used relatively early, the discharge rate from the State hospitals increased by some 21 percent.

I am happy to report that the improved rate of discharge continued during the past year. This improved rate of discharge has now been noted throughout the country and last year in 43 of the 48 States the number of patients in mental hospitals was less than had been anticipated.

There has been some criticism to the effect that this was as a result of a long-range trend and was not related to the drugs.

I would like to submit as evidence the paper by Brill and Patton—exhibit A—which presents solid statistical demonstration of these facts.

By now all but the most carping critics have been forced to admit that these drugs do have an effect on the course of mental illness and have a definite role in treatment.

Senator HILL. We will be very happy to have that.

(The information referred to follows:)

[Reprinted from The American Journal of Psychiatry, vol. 114, No. 6, December 1957]

ANALYSIS OF 1955–56 POPULATION FALL IN NEW YORK STATE MENTAL HOSPITALS IN FIRST YEAR OF LARGE-SCALE UUSE OF TRANQUILIZING DRUGS [1] [2]

Henry Brill, M. D., and Robert E. Patton [3]

POPULATION PROBLEM IN THE NEW YORK STATE MENTAL HOSPITALS AND INTRODUCTION OF CHLORPROMAZINE AND RESERPINE

On March 31, 1954, the census of the New York State mental hospitals was 90,893, over double the number of 25 years before and 4 times the 1900 figure. The steady increase had not been visibly influenced by 20 years of other somatic therapies, and when chlorpromazine and reserpine appeared on the scene in late 1953 and early 1954 it seemed unlikely that these could offer any more in this direction. However, early results were too encouraging to be ignored and by the end of 1954 an expanding series of pilot projects throughout the department of mental hygiene had clearly confirmed the therapeutic activity and clinical usefulness of these drugs. In January 1955 chlorpromazine and reserpine were made available for general use in the State hospitals and schools and large-scale application was begun.

POSSIBILITY OF EFFECT ON POPULATION OF MENTAL HOSPITALS: PROBLEMS OF EVALUATION

One of the first and most insistent questions which had to be faced was the deceptively simple one whether this new method would at last halt or reverse the long record of population rise in the mental hospitals of the State. Any answer to this question, if made in advance of actual trial, involved at least three assumptions, all of them open to doubt:

1. *If effective, the new therapy would necessarily cut the need for hospital beds.*—The tuberculosis and contagious disease hospitals and epileptic colonies were often

[1] Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13–17, 1957.

[2] The authors wish to make grateful acknowledgment of a grant for this study from the Albert and Mary Lasker Foundation.

[3] Department of Mental Hygiene, State Office Building, Albany, N. Y.

quoted as examples where therapy had reduced bed needs. Their validity was doubtful because these institutions serve well-defined and fixed groups of patients while the mental hospitals receive a broad and ever-changing variety of cases. As a result, the latter are more comparable in function to general hospitals whose increase of bed capacity has equaled that of the mental hospitals during the last 25 years, in spite of the epoch-making therapeutic gains of the period. Here, at least, advance in treatment has not led to reduction of patient population.

2. *That the effect of a new therapy on bed needs would become evident in a comparatively short time.* Psychiatric hospital experience has been to the contrary. Even the most outstanding achievements have produced only a slow decline of census. It was almost 10 years after the introduction of dilantin that the epileptic colony in New York State began to show a clear-cut reduction. In spite of brilliant advances in antiluetic therapy, the number of paretics in its State hospitals continued to increase until 1945 when it reached 3,578, and had fallen only to 3,034 by 1956. The benefits of new procedures may very well be expressed primarily in terms other than those of need for hospital beds. The reduction of mortality rates may balance the effect of an increase of releases for years. This is especially true in illnesses where chronic disability is a factor.

3. *That if a fall of population or any other general statistical change took place after introduction of chemotherapy, it would be a relatively simple matter to establish a cause and effect relationship.* This assumption overlooks the formidable difficulties that stand in the way of disentangling the effect of any one factor from the complex of known and unknown influences which control movement of mental hospital population. *Post hoc* reasoning is particularly difficult to avoid in this type of interpretation.

In spite of these and other reservations, it was obvious that the tranquilizers were capable of being applied on a scale never before approached in psychiatric therapy. This might be an important aid in evaluation, especially if a large number of patients could be reached during the first year or two. Under such conditions useful large-scale historical comparisons might be made, something which had never really been achieved for other somatic therapies because of the slow growth in their volume of use. The rapidity of extension of drug therapy proved to be entirely satisfactory from this point of view. In the first fiscal year of full-scale use this treatment was given to over 30,000 patients, or 27.8 percent of all possible cases. Since the amount given in the previous year (1954–55) was quite small, it was possible to use the latter as a sort of control period for comparison with 1955–56 which thus approximated a test period. We hoped data derived from this comparison might lend perspective to the studies of controlled series of cases, double-blind studies, cohort studies and basic researches which were being carried out in various research centers of the department.

LARGE-SCALE APPLICATION: EFFECT ON RESTRAINT AND SECLUSION PROMPT

The first effect of the new therapy in the State hospitals was a spectacular reduction of disturbed behavior and this remains as one of its most outstanding contributions. As the use of tranquilizing drugs increased, restraint and seclusion decreased (fig. 1). By the end of a year these figures had been cut almost in half and at the end of the second year they had been again reduced by a half.

In the State schools, response was less spectacular but still very good. Restraint-seclusion figures fell from 16.8 to 6.7 in the 2-year span. This confirms the clinical observation that the tranquilizers are useful in cases of mental deficiency, but less regularly than in the mentally ill. Any attempt to explain these results on dynamic factors alone must include the fact that the response is generally better in severe defectives where contact is poorest and less satisfactory in the behavior disorders of higher grade cases. Similarly, among children in State hospital units psychotic excitements respond far better than do primary behavior disorders.

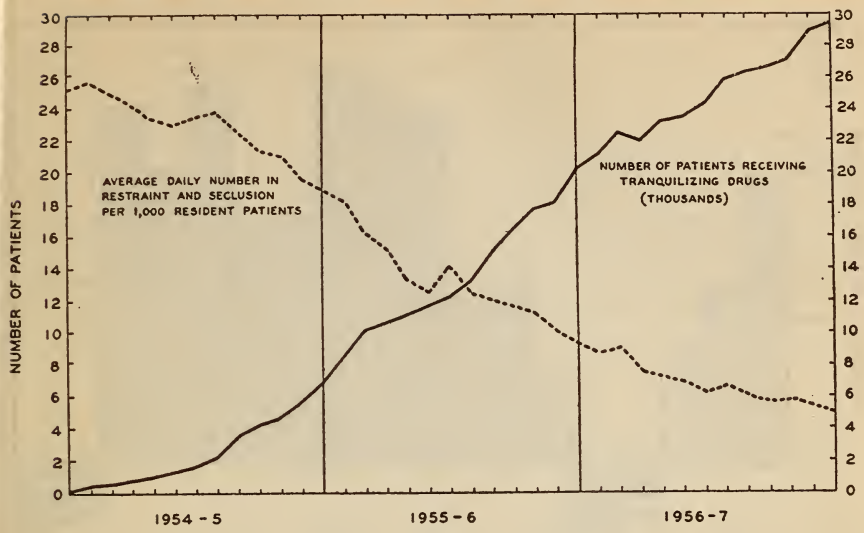

FIGURE 1.—Somatic therapy and restraint-seclusion. New York Civil State Hospitals.

POPULATION FALL 1955–56

By midsummer of 1955 it had become apparent that a change in population equilibrium was taking place in the mental hospitals. This became more pronounced in the succeeding months and on March 31, 1956, the census showed a reduction of some 500 over the year instead of the expected increase of 2,000 to 2,500. The same trend continued in the second year which ended with a further decrease of almost 500 (fig. 2).

Not long after our figures had begun to show a clear downward trend we heard that other States were recording similar changes. This group now includes a large majority of the States. The mental hospital population of the United States fell by over 7,000 patients during the fiscal year 1956,[4] and recently there have also been reports of a reduction in the British mental hospitals. Thus, our experience is not unique but appears to represent a broad trend which deserves careful examination and analysis of all available data.

THE METHOD AND ITS ASSUMPTIONS

This paper will present the results of an analysis of New York State figures with attention centered on the fall in population and the way in which it is distributed among the various categories of patients. It will be compared with New York State's only previous significant reduction in mental hospital population, which took place during World War II, and will be examined in the light of some long-term trends. Our method involves the assumption that the way in which the fall is distributed among the various categories of patients may offer a clue as to the factor or factors which caused it. If it is due to somatic therapy of functional disorder, it should have a more specific distribution than if due to social, economic, or other influences which should affect all classes in hospitals more uniformly and should affect State schools also. The paper is not a comparison of the results in 2 groups of cases, 1 of which had drug treatment and the other did not. Instead it compares and contrasts the total results of 2 successive years of work in a mental hospital system.

The great identifiable difference between the 2 years is that in the second year some 30,000 patients received drug therapy. We know of no other major change in operating conditions which took place between 1954–55 and 1955–56. A series of intensive treatment programs with special budgetary provision were undertaken after the close of the fiscal year 1955–56 and are now operating but they did not influence the 2 years under examination.

[4] Public Health Reports, 72: No. 1, p. 14, January 1957.

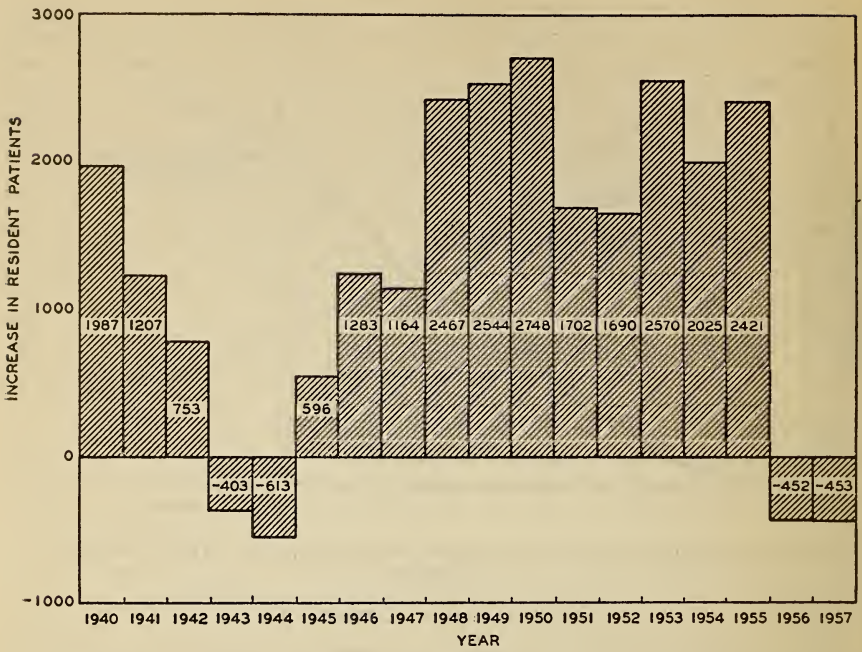

FIGURE 2.—Annual increase in resident patients. New York Civil State Hospitals.

STATISTICAL COMPARISON OF FIRST YEAR OF LARGE-SCALE DRUG THERAPY WITH PREVIOUS YEAR

When the data for 1955–56 were compared with 1954–55,[5] the following significant points emerged:

1. There was no outstanding increase of either personnel time or per capita expenditure, although 1955–56 had a normal cost increase in line with a long-term trend.

	Per capita cost	Ward personnel hours available per patient
1953–54	$1,123	312
1954–55	1,206	321
1955–56	1,263	331

2. The number of patients completing a course of somatic therapy during the year increased from 16,863 to 40,301. This increase of 250 percent was due entirely to the new drug therapy and it appears large enough to produce a material effect on releases if the treatment is therapeutically active.

3. The census rise of 2,421 patients in 1954–55 was replaced by a reduction of 452 in 1955–56, a change of 2,873. This difference was due primarily to an increase of 2,793 in the number of patients released (table 1). Age specific death rates declined slightly but the total number of deaths was higher. This is in line with a long-term trend due to aging of the population.

4. Total admissions remained unchanged but there was a slight increase in the number of geriatric cases and a small decrease in the number of schizophrenics.

5. There was some improvement in releases of all diagnostic groups except senile psychoses. Those categories of patient who might be expected to benefit

[5] Additional tables are available on request from the authors.

most from drug therapy showed the most marked increase of releases (table 2) and the most marked drop in residual population at the end of the year (fig. 4). There was a decrease of 683 schizophrenics during the year and a reduction of 169 manic-depressives while there was an increase of 433 in psychoses of the senium and an increase of 46 in the alcoholic group.

6. Results according to duration of hospitalization are shown in figure 3 where the greatest relative advantage appears in the group admitted 2 to 4 years previously. Our data show that some 30 percent of patients with 3 years' hospital residence were treated with drugs and the outlook for release from this group improved by 52 percent. One cannot invoke the explanation that favorable long-term cases were chosen for treatment because these figures include all releases from the entire population of this class. The relative improvement in the test year was much less among newly admitted cases where any change of administrative policy might be expected to have its greatest impact.

TABLE 1.—*Movement of resident patients in New York Civil State hospitals, fiscal years ending Mar. 31, 1955 and 1956*

Year	Resident patients, start of period	Admissions	Deaths	All releases alive	All returns	Resident patients end of period
1955	90,893	21,459	8,078	16,069	5,109	93,314
1956	93,314	21,454	8,345	18,862	5,301	92,862
Change	+2,421	−5	+267	+2,793	+192	−452

TABLE 2.—*Patients released alive*[1] *during 1954–55 and 1955–56 fiscal years with number of these patients who had received drug treatment in 1955–56 by major diagnosis groups*

Released alive	Total	Diagnosis							
		General paresis	Alcoholic psychoses	Psychoses with cerebral arteriosclerosis	Senile psychoses	Involutional psychoses	Manic-depressive psychoses	Dementia praecox	All other
1955	14,362	110	1,456	710	260	1,431	1,069	6,426	2,900
1956	17,058	114	1,562	802	233	1,688	1,176	7,865	3,618
Percent increase	18.8	3.6	7.3	13.0	−10.4	18.0	10.0	22.4	24.8
1956 treated	5,222	16	271	218	61	603	500	2,670	883
Percent treated	30.6	14.0	17.3	27.2	26.2	35.7	42.5	33.9	24.4

[1] Does not include patients placed on family care or escapes.

7. The use of drugs was concentrated primarily in certain groups of functiona psychoses, especially among women and among the newly admitted cases. Some tranquilizing drug therapy was, however, in use among virtually all categories and the variations in percentage were often not as marked as might have been expected. Of the patients available for treatment, 27.9 percent received drug therapy, with males showing a figure of 20.9 and females 33.9. The proportion ranged from 9 percent in male cases of CNS lues to 43 percent in female manic-depressives and 46 percent in female psychoneurotics.

8. No quantitative correlation could be shown between the percentage of patients receiving drug therapy in a given hospital or in a given category and the amount of improvement in releases. This may, and probably does, reflect a differential responsiveness to drugs in various categories of patient and also may reflect the differences in use of drug therapy in various hospitals. Since all hospitals used large amounts of drug therapy, such differences should not be overemphasized. The correlation of volume of drug therapy with reduction in restraint and seclusion was much closer than with releases.

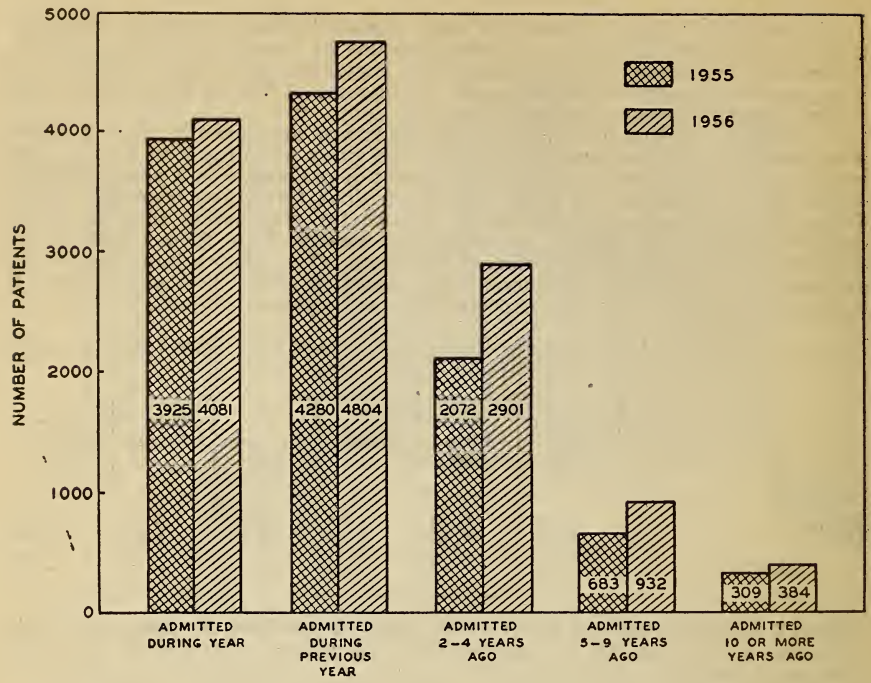

FIGURE 3.—Patients placed on convalescent care by time since admission. New York Civil State Hospitals.

TABLE 3.—*Patients released alive* [1] *during 1954–55 and 1955–56 fiscal years with number of these patients who had received drug treatment in 1955–56 by time since admission*

Released alive	Total	Time since admission									
		Less than 3 mos.	3 to 5 mos.	6 to 11 mos.	1 yr.	2 yrs.	3 yrs.	4 yrs.	5 to 9 yrs.	10 to 19 yrs.	20 yrs. and over
1955	14,362	310	1,224	4,478	5,018	1,318	584	360	746	254	70
1956	17,058	396	1,511	4,865	5,702	1,759	885	530	996	340	74
Percent increase	18.8	27.7	23.4	8.6	13.6	33.5	51.5	47.2	33.5	33.9	5.7
1956 treated	5,222	164	718	2,100	1,251	384	235	120	197	46	7
Percent treated	30.6	41.4	47.5	43.2	21.9	21.8	26.6	22.6	19.8	13.5	9.5

[1] Does not include patients placed on family care or escapes.

9. Improvements in releases have continued throughout 1956–57 at about the same level, although we have not yet been able to analyze this data in detail.

10. A word as to the stability of the response to drug therapy is warranted. Because of the State's policy of free admissions with no waiting lists, the number of returns from convalescent leave expresses clearly the tolerance of the community toward mental symptoms. One would expect that attempts to force releases would be accompanied by an increased number of returns. This did not happen. In the first year of large-scale drug treatment the proportion of returns actually fell somewhat. In the second, it rose again slightly but did not reach the previous level.

COMPARISON WITH 1942–43 PERIOD

Has there been some worldwide, or at least nationwide, change other than drug therapy which might account for these facts, some shift in the equilibrium of forces that control the size of mental hospital population? Such a change did occur in World War II and brought about widespread reductions of mental hospital population.

A statistical comparison of the two periods in the New York State hospitals reveals the following significant differences (fig. 4).

1. Admissions fell sharply in World War II from 17,611 cases in 1941–42 to 16,489 for 1942–43 (corrected to 12 months). Admissions remained high in 1955–56 (table 1).

2. In both periods there was a rise of the number on leave from the hospital at the end of the fiscal year (from 7,501 to 8,677 in 1942–43 and from 9,928 to 12,019 in 1955–56). The recent rise was much larger.

3. The wartime drop was of gradual development which reached a maximum and gradually receded. In contrast, the present fall was abrupt and without warning (fig. 2).

4. The State schools lost population during 2 of 3 wartime years. They continued to gain in 1955–56, although at about half the usual rate.

5. The wartime shift affected both functional and organic cases (fig. 4) and especially psychoses of the senium. It followed a nonspecific distribution. The 1955–56 change was much more selective. It involved functional cases strongly and organic cases much less. It was not limited, however, to categories where drug therapy could have been expected to exert a strong influence and the increase in geriatric and alcoholic cases was less than expected in the State hospitals (fig. 4).

These lead to 2 inferences: (1) the population fall of 1955–56 was due to the coexistence of 2 favorable factors, a stronger specific one due to drug therapy and a less marked, nonspecific one, perhaps of socioeconomic nature which was similar in distribution but less in extent than that of World War II; (2) if this nonspecific factor should be reversed it might obliterate much of the gain due to drugs. The importance of this fact for practical planning is obvious.

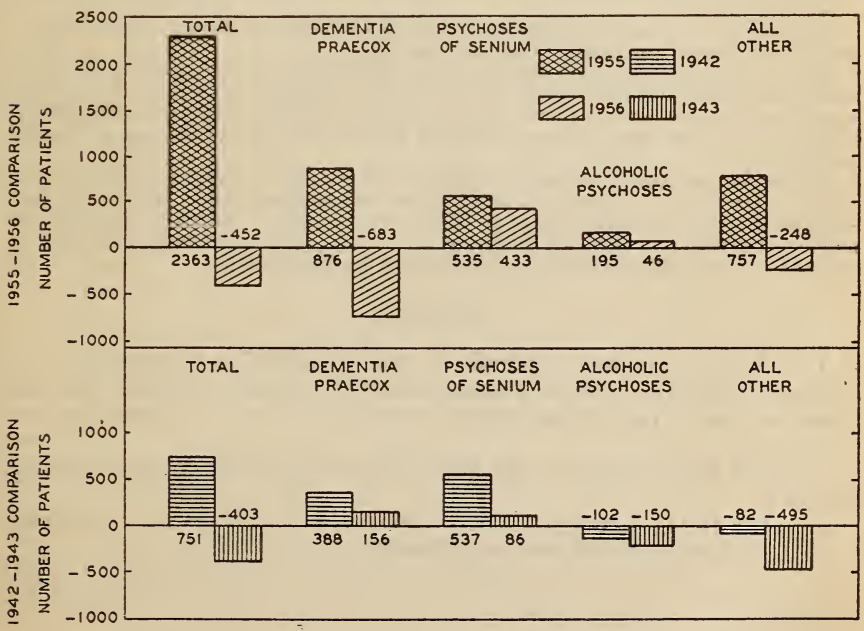

FIGURE 4.—Comparison of change in population in 1942–1943 with 1955–1956. New York Civil State Hospitals.

SUMMARY AND CONCLUSIONS

In the year 1955–56 the number of patients reached by somatic therapy in the mental hospitals of New York State was increased by some 250 percent due to the introduction of the tranquilizing drugs, chlorpromazine and reserpine. At the end of that year the residual population of the State hospitals showed a fall of some 500 patients in comparison with the increase of 2,500 of the year before and the average rise of 2,000 per year for the previous decade. More recently, figures have become available indicating that similar changes have occurred very widely elsewhere. In New York the same trend continued during 1956–57, producing a further reduction of some 500. Going on the assumption that the cause of the fall of population might be reflected to some degree in the distribution of the sudden population change, we carried out an analysis which compared the overall data for 1955–56 with that for the previous year. No difference in hospital procedure or method was identified except the addition of drug therapy on a large scale in 1955–56.

In addition to comparing 1954–55 with 1955–56, we also compared the recent population fall with that which occurred during World War II.

From this work the following conclusions are drawn:

1. A major identifiable influence in the present trend toward stabilization of New York State mental hospital population is the large-scale use of tranquilizing drugs, of which chlorpromazine now constitutes about 75 percent.

2. In addition, there appears to be a weaker influence of nonspecific distribution operating in the State school population and in categories of mental hospital patients where the drugs have only a restricted and symptomatic indication. These categories are still continuing their long-term increase but the rate of growth has diminished.

3. The 1955–56 improvement was distributed as might be expected from clinical experience with drugs. It was relatively greater among functional cases and cases of longer hospital stay, especially schizophrenics.

4. The present fall of State hospital population in New York differs basically from the 1942–43 reduction in: (1) the suddenness of its development, (2) the fact that hospital admissions remained high, (3) its involving primarily a fall in the residual schizophrenic population while the wartime change involved all categories in a diffuse fashion.

5. In spite of a marked increase in releases following large-scale drug therapy, the rate of return was slightly less than before.

6. One of the most outstanding values of the use of tranquilizing drugs in mental institutions is reflected in the data on restraint and seclusion. In 2 years' time these figures were reduced by 75 percent. This is only a mathematical expression of what has been a revolution in the care and treatment of mental patients.

7. Our figures do not support the thesis that we are at a point where we can expect a large-scale reduction of need for mental hospital beds. There is reason to believe that a downward change in the economic level might very well have such a large negative effect as to produce again an increase of hospital population unless even more effective treatment methods are developed.

EDITORIAL

Dr. KLINE. In an editorial in the Psychiatric Quarterly, Dr. Newton Bigelow, former commissioner of mental hygiene for the State of New York, states much better than I can the present state of affairs.

I would like to submit the editorial as an exhibit and read paragraph 1.

Senator HILL. All, right, sir. We would be happy to have that.

(The information referred to follows:)

[Reprinted from The Psychiatric Quarterly, April, 1957, State Hospitals Press, Utica, N. Y.]

EDITORIAL COMMENT

"Rose Is a Rose Is a Rose Is a Rose"

"Tranquilizing," "ataractic" or "phrenopraxic"? "Rose is a rose is a rose is a rose," as one of our foremost authorities on "word salads" puts it. A rose is, in sober fact, a flower. It is also a ceiling fixture or a chandelier, a circular plate at the base of a door knob, a watering pot nozzle, a color, a girl's name, a stained glass window, a heraldic badge, a shape in which precious stones are cut, a disease (erysipelas), a decoration around a sound hole in a lute, a compass card—and probably a lot of other things. "Rose" is also a word, a four-letter word but respectable (except in Arabic translation, in which it is a forthright allusion to a point of interest in female anatomy); as a word, it is a sound and is also a series of standardized marks on paper. As a sound or a printed squiggle, "rose" is not a flower—or a ceiling fixture. It is an auditory or visual symbol signifying the flower—or maybe the ceiling fixture. And the symbol or the word is not the thing, as the General Semanticists are fond of telling us. Neither is Thing (a flower), for which the word-symbol stands, Thing (a watering pot nozzle), for which it also stands.

If Gertrude Stein's "Rose is a rose is a rose is a rose," in spite of its protean forms and multitudinous roles, what can be said of a "tranquilizer"? A "tranquilizer" is a misnomer for an "ataractic" or "phrenopraxic" drug. As the rose is a rose, the tranquilizer is a tranquilizer. A tranquilizer is reserpine, serpasil, rauwsed, thorazine, chlorpromazine. A rose is a flower. But a flower is not a watering pot nozzle or a compass card. A fever is scarlet is typhoid is typhus. But typhoid is not scarlet fever or typhus. To confuse a flower with a watering pot, or typhus with typhoid fever, is to act as if words were things. No gardener would make the first mistake, no physician the second. But one may wonder if, in the case of the "tranquilizers" or the "phrenopractic" drugs, or whatever, physicians are not in fact making the second.

When there is a need—almost a necessity—to classify, the temptation is great to take the word or the symbol for the thing. But Tranquilizer is not Tranquilizer—or Tranquilizer. There are others under test than the two in most general use; and even the claims of those two to priority can be disputed. The argument is very likely shaky; but there are those who would hold that tranquilizers one and two are not reserpine and chlorpromazine, but the bromides and the barbiturates. Or call the new drugs "phrenopraxic," which is at least a slightly better term, supported by a better argument. "Phrenopraxic" means "acting on the brain," and avoids the doubtful implication that the action is "tranquilizing." But, in the broad sense, one could thus consider morphine, cocaine and their derivatives as phrenopraxic drugs. And one might suppose that sticking an "ice pick" through the orbit into the brain, or even rapping on the skull with brass knuckles, could be classified as a "phrenopraxic" procedure.

Where the new drugs are concerned, it is not only evident that the word is not only not the thing, but that diligent inquiry among the Greeks has not yet yielded a word which is even approximately a good symbol for a classification. Maybe this would be a good place to apply mathematical logic, as a means of setting forth the situation more rigorously, with tighter reasoning. Even without it, an effort can usefully be made to avoid classifications and generalities, describe what occurs in the simplest terms to which it can be reduced, and work—at first—for a minimum of conclusions. The problem can then be stated something like this: We administer reserpine or chlorpromazine (or substance x, y or z) to hospitalized mental patients. It then becomes possible to do psychotherapy with previously recalcitrant patients, to move other difficult cases from closed to open wards, to open some closed wards altogether, and to discharge or approve for convalescent status large numbers of patients previously regarded as hopeless. Why? Or: We do this, and that happens. Why? Or, in mathematical terms: If a, then b. Why?

Even with the problem reduced to these stark and naked terms, one could write a volume or two, defining, delimiting and narrowing.

Consider the first phrasing in which the proposition was stated: "We administer reserpine or chlorpromazine * * *". Are the operative words "reserpine or

chlorpromazine," as generally assumed, or are they "We administer"? There are obvious, if not too convincing, points to be made in support of the latter suggestion.

Or consider the facts that psychotherapy can now be done with difficult patients, that others can be moved to open wards, that still others can be placed in convalescent status, and that others can be discharged. In all these instances, something can now be done that could not be done before. Why this particular something can now be done, pertains to—and is part of—the answer to a general question: Why?

The conventional answer, and the one heard almost universally in conversation and in formal report, is that the new drugs do something or other to the patient. They affect his mind or his emotions in this way or that. They may be conceived of as abolishing his hallucinations or making them less frightening, as reducing his anxiety to the point where normal intellectual functioning resumes its control, or as slowing his mentation and his reactions so that the psychotherapist can gain his attention for treatment. There must be a dozen other guesses at what the new drugs do to the patient—these few are cited at random.

But perhaps one should consider what the new drugs do to others than the patients receiving them. Szasz notes: "* * * it is * * * obvious, and often explicitly stated, that these drugs make the disturbed hospitalized patient more manageable (i. e., less disturbing to ward personnel and other patients). Accordingly, we also treat the hospital staff and patients other than those who receive the drug." Or one may take Duncan Whitehead's remark that the new drugs have completely changed the attitude of the ward personnel and the physicians who treat the patients.

To avert any attempt at *reductio ad absurdum*, let it be noted that this is neither a statement nor an implication that we treat the staff and *not* the patient. It is, perhaps, too bad that matters are not that simple. When one treats the staff *in addition* to the patient, there is the necessity of evaluating the results of two treatments and the very complicated manner of their interaction. One can illustrate rather nicely from the profession of witch-doctoring. A witch doctor treats a boy for warts by rubbing the lesions with mud and reciting an abracadabra. He treats a hunter who has been coming home with no game by spitting on his arrowheads and rubbing his bow with suet over a smoky fire. The boy's warts disappear; and the once unlucky hunter kills so many deer that a dozen men have to help him bring home the carcasses. The part of these splendid cures that may be due to the patients' confidence in the medicine man, and the part due to the medicine man's own supreme confidence in his medical trash, are both subjects for wild speculation.

It is a matter of speculation, if not so wild speculation, as to what part the treatment of the patient by the new drug and what part the treatment of the physician in administering it play in the patient's ultimate improvement or recovery. It is not necessary to document for any psychiatrist the fact that enthusiasm and confidence of staff and nonmedical personnel have an enormous effect on improvement and recovery rates. High morale among staff members and ward workers means higher discharge rates. Something like this happened when the bromides were introduced extensively in mental hospital practice 30 years ago. It happened again when insulin shock treatment was first employed, when metrazol came into use, when electric shock more or less superseded both. It happened with psychosurgery. Now it is happening—and on a much larger scale—with the "tranquilizers" or "ataractics" or "phrenopraxics." It is true that today the physicians' enthusiasm and the patients' improvement both seem unprecedented in intensity, duration and extent. But the cautious will observe that the difference may not be one of kind; it may be one of degree.

What has been going on can be seen in almost any mental institution. The administrator is carrying his burden with straightened and less-weighted shoulders. The clinical director talks with enthusiasm instead of apathy. The senior staff member acts as if psychiatry were a worthwhile specialty after all. The resident has new interest, energy and enthusiasm. The nursing staff is alert and expectant. The attendants, the solid foundation of any hospital, are encouraged and hopeful. A great shrouding of gloom has lifted; there are glimpses, at least, of the sun. The legend over the gates, "Abandon Hope," has been amended by striking out 'Abandon."

The cause of this great lifting of gloom is in no doubt; it is the introduction and use of the new drugs—whatever we call them or however they operate. The present discourse is an examination of those problems. If Gertrude Stein's rose is a rose, does it grow on a bush or a sprinkling can? Does it function by photosynthesis or the gardener's human effort? Have we a flower or a gadget with holes in it? And do we pick it or water with it? So, is a new drug a phrenopraxic, an ataractic or a tranquilizer? And does it operate by doing this or that to our patients—or by doing something to them and something to us which combine to be reflected in more successful treatment of our patients?

A drug's action is obviously more important than its label. Montague or Capulet, and "a rose by any other name * * *". But in the interests of intelligent discussion, the question of action is a part of a larger semantic question. If we don't know whether a thing flies or swims, how can we tell whether it is a bird or a fish? One must at least view the general effects of a medication before deciding to call it a sedative or a heart stimulant. We also view, describe and define, in the broad sense, by exclusion. We exclude the bromides and the barbiturates from lists of vaccines, hormones or cardiovascular agents. So it seems easiest to begin discussion of the new drugs by discussion of what they are not.

The new drugs are not hypnotics or sedatives, although there is a family resemblance. They are not "tranquilizers," which they were called early in their use when it became apparent that one of their common effects was to make a patient feel or appear more transquil. But they do more and less than this. They do less, in that they do not always "tranquilize" the patient (which is a very temperate view of it). They do more, in that their effects are so sweeping as frequently to lead to a patient's discharge from hospital, sometimes with, sometimes without, psychotherapy. How they operate—whether strictly through pharmacological effect on the patient, or partly through such effect and partly through the indirect effect of stimulating and encouraging the medical and auxiliary staff, and so treating the patient—is a point already mentioned, and is one for much discussion.

As Szasz says, when we treat patients with drugs whose effects on the patients also affect the attitude of the staff, we also treat the staff. Or to put it in Whitehead's terminology, the new drugs have changed the attitude of all in contract with patients. There have been sudden and spectacular therapeutic successes, accompanied by a sudden upsurge of hope and professional optimism. None of these things is peculiar to our time. They were probably known to Bam-bam-bam, the medicine man, who struck a new and cheerful rhythm on his human-hide drum, danced a new step in consequence, and then saw the devils rush in terror from half a bewitched and persecuted tribe.

Similar, though certainly less well-founded, enthusiasm, and that principally among nonprofessionals, must have been aroused by Mesmer's dramatic animal-magnetism treatment of what we now know was neurosis. In professional medical, but nonpsychiatric, circles, we have recently seen similar enthusiasm over the antibiotics. In psychiatric circles themselves, there was certainly similar enthusiasm—and very good therapeutic results—when Amariah Brigham joined to the humane treatment of Pinel and Tuke the added interest of occupation— in his new institution at Utica, N. Y.

Brigham's "moral treatment" of a century and some added years ago, was a sweeping variety of nonspecific institutional psychotherapy and occupational therapy. The whole organization of his "asylum" joined in this to promote the patients' well-being, with occupations and diversions ranging from gardening and playing in the band to classroom study, checker-playing and whittling. (Parenthetically, it should be remarked that Brigham thought he had something like a specific for mental disorder in whittling.) His program as a whole would be known today as "total push," and everybody can be presumed to be familiar with its practice and principles. It apparently employed no general medical or surgical procedure beyond occasional placebos. And during the first years of operation at Utica, when enthusiasm was high, there were better than 40 percent of recoveries. After making full allowance for the facts that neither hospital population nor admission and discharge statistics in the 1840's and 1850's are fully comparable to today's, this is a record to make everybody stop and think before jumping to enthusiastic conclusions about this or that given element of any new therapy.

To this very same point, one may cite a recent newspaper report from the National Institute of Mental Health. Dr. Jordan M. Scher conducted a "work therapy" experiment with a small group (11 women) of chronic schizophrenic patients. These were persuaded or "forced" to undertake "carefully regimented" work schedules—personal chores at first, then outside work—what is commonly called "good hard work." Four of the 11 (though not necessarily recovered) are out of the hospital; two more are reported improving. This is not noted here because of any merits, or their lack, attaching to this method of treatment. It is noted simply because it represents still another procedure which shows promising results on first being tried intensively. It raises questions as to what would happen if there were to be intensive trials of (1) bottle-feeding, (2) saline solution injections and bed rest, (3) military drill, (4) vegetable diet, or (5) training in spherical trigonometry. The ducking stool must have had its early recoveries. And there is an impressive list of quack remedies, from various forms of faith healing to chiropractic to dianetics, all of which benefited huge numbers of hysterics, hypochondriacs and other assorted neurotics (but not schizophrenics!)—as long as enthusiasm was high.

This is, intentionally, a biased presentation from an extremist point of view. If it were the whole picture, taken in proper perspective, one could logically argue that the solution to the mental hospital problem would be placebo dosage for the patients, administered enthusiastically by a hypomanically-devoted medical staff (a situation which might be achieved readily by suitable medication for the staff instead of the patients). This is not only not the whole picture, it is a completely cockeyed picture.

Cockeyed or not, the general scene is recognizable. Any physical treatment is compounded of physical agency plus physician—this distortion simply enlarges and distorts the share of the picture occupied by the physician. It is presented as a corrective to the attitude which credits all results (or anyway 99.99 percent) to the treatment agent, and nothing to the physician. One could cite, off hand, examples of devotion to a treatment that most of us would consider devotion overdone. For instance, most of us might hold that Freeman, Myerson and Moreno were somewhat too devoted respectively to the merits of psychosurgery, total push and psychodrama, neglecting the role of the therapist. And some of us can recall, and not too long since, when two well-known clinicians were so enamored of their favorite drugs that they were nicknamed "Bromide" Doe and "Amphetamine" Roe by more skeptical colleagues.

One should hasten to add with the greatest emphasis that the bromides and amphetamine, as well as psychosurgery, total push and psychodrama, have their points. Quite aside from that, many clinicians feel that there are conditions for which insulin coma is still the treatment of choice. Most large institutions still make at least a limited use of psychosurgery. Few of the major treatments in recent vogue have completely outlived their psychiatric usefulness. But none is a panacea. And maybe the new drugs are not a panacea either, though the outlook for them seems, in all sober thought, very much better than for any physical treatment in living memory. Yet the element of enthusiasm over the new is necessarily administered with every treatment with them, and this element necessarily obscures a clear view of their action and interferes with every attempt to judge their effects objectively and impartially.

It may be judged on the basis of long experience that today's enthusiasm for the new drugs is higher than any enthusiasm that was ever displayed for past psychiatric medication. It may also be judged that enthusiasm is playing a lesser part in therapeutic effectiveness than in the past. The chief value of some treatments of the past appears to have been in the atmosphere of enthusiastic psychotherapy (or perhaps milieu therapy) they introduced to the hospital. This does not seem to be the case with the new pharmaceuticals; and one may most sincerely hope that it isn't. For enthusiasm has never been a lastingly satisfactory therapy in the past. It can't be ordered from a drug house, stored, measured and administered in controlled doses. And it can't be relied upon over a prolonged period. A drug *can* be ordered, stored, measured, controlled and relied upon. It would be an asnwer to the psychiatrist's prayer if he could use the new drugs and rely on them as the internist does with penicillin.

It should be pointed out here that the success of the new drugs should not be to the prejudice of anybody's past psychiatric practice or present psychiatric theory. Freud was the architect and the original builder of the great structure of psychotherapy that towers over the psychiatric world today. And concerning

the psychoses, he said flatly: "Our hope for the future lies here in organic chemistry or in an approach to this through endocrinology." Originally at least, he looked for a physiological basis for the neuroses as well, referring to them as late as 1925 as "disturbances of the body, toxic conditions," and remarking that if somebody were to "succeed in isolating and demonstrating the hypothetical substances concerned in neuroses," he would not encounter opposition from the medical profession—an obvious reference to the opposition aroused by psychoanalysis.[9] Jones adds that years later Freud made a "half-serious" prediction to him "that in time to come it should be possible to cure hysteria (sic) by administering a chemical drug without any psychological treatment." "Half-serious" or not, Freud certainly showed himself far from averse to the idea of loosing the Gordian knot of psychotherapy by slashing through it with the sword of drug therapy. * * * And in the opposite corner, the sardonic grin is now broader on the face of the organicist.

The problem is how to judge, evaluate or assess just what is this new development. If the psychiatrist is to form an opinion of the worth of the new drugs—as "tranquilizers," "ataractics" or "phrenopraxics"—some way must be found to judge separately their direct effects on the patients receiving them, and the indirect effects caused by the change in attitude they bring about in hospital personnel and "untreated" patients.

Elaborate "blind," "double blind" and now "triple blind" tests have been devised for the alternate administration of test drug and placebo—with the idea of having the results evaluated by persons who have no idea what has been given or to whom. In the "triple blind" technique, nobody involved in either the treatment or evaluation of a drug knows its identity, or whether a patient has received it or a placebo. After placebo reactors are carefully excluded from the group, the drug or placebo is prescribed at the discretion of a physician who receives, and acts on, the reports of observers, and who has no contact himself with the patients tested.

Nobody would assert that this is a perfect procedure, and almost everybody would agree that there is no perfect procedure. A great many criticisms could probably be made; and two occur immediately. The first is that, if a drug has a marked effect, the fact of its administration would be obvious to observers. There may be a characteristic facies, significant pupillary effects, differences in posture and gait, slurring or hesitancy in speech. A doctor, a psychiatric nurse or an attendant who walks into a ward and finds it full of patients who exhibit lethargy and flushed faces knows of a certainty that something has been administered and that it is no placebo.

And so the people who are supposed to be "blind" may not be so "blind" after all. They do not know the identity of the drug, but they are likely to know it has been administered. And if personnel as well as patients are treated by the drugs, the "blind" staff members are also being treated. There is little more light than before on how much improvement may be due to the effect of a drug on the patient and how much may be due to the effect of the same drug on the physician, nurse and attendant.

This, it should be emphasized, does not devaluate the "blind" or the "triple blind" test. Such a test still leaves evaluation of any specific drug to a group which has no idea of the drug's identity. It simply does not solve the problem of distinguishing direct effect on patient from indirect effect on patient through indirect effect on personnel—and it was not primarily devised to do so. But it is a pity that it doesn't. It leaves us still wondering if a method can be found that does—and wondering how to apply it if one is found. Of course in the test of a new drug with no readily detectable or readily recognizable effects, this comment would not apply; the staff would not be primarily affected, and the patient would be. Or would the patient be likely to be affected to any desirable extent by a drug of which the effects were not readily detectable or readily recognizable by doctors and ward personnel?

A second criticism of the "blind" technique is based on a theory held by some European physicians—not necessarily psychiatrists. It points to the fact that the physician's personality is an essential part of his whole treatment and extends this to the assertion that the physician's personality is an essential part of any drug

treatment. But "blind" tests divorce the physician who orders the drug from the treatment. How then can such tests evaluate a drug therapy properly? This criticism brings up a difference in theory; and there is little point to debating it here, aside from noting that, if this argument were insisted on to its logical extreme, it would hold dosage standardization to be both useless and impossible. But both clinical and research experience testify that standardization is both possible and successful (and it might be remarked that it is ordinarily arrived at with the help, not even of human, but of animal, experimentation, where the physician's personality presumably plays no role at all).

We have, or think we have, objective, scientifically-determined facts about the physical effects—and to avoid argument, one may assume the psychological as well—of hundreds of medications from analgesics to vitamins. These include certain drugs that have certain scientifically-established effects on mental patients, even though their place of employment, the mental hospital ward, is no laboratory environment. In the case of the "new" drugs—which are still undergoing, besides hospital use, extensive laboratory testing, the problem is to identify and study their effects—physiologically, pharmacologically and psychologically—using the best techniques available to identify them and measure their extent. (More than that from this may come new knowledge of brain anatomy and function.)

It seems evident that—even with their obvious limitations—the various "blind" techniques are the best available. Even with peeking through the blindfold admitted, they should still measure with some degree of dependability, any differences that exist between one drug and another in current use. The "blind" techniques, even at their best, cannot, of course, measure differences between the effects of drugs and those of surgical procedures, which are identifiable by bandaging and scars, or between those of drugs and those of occupational therapy. Except in specially-devised and unusual experiments, they also would not measure differences between pharmaceuticals which are no longer prescribed massively and enthusiastically, and the "new drug" groups.

For measurement of whatever treatment factors may be operative, aside from the measurable properties of the drugs themselves, no objective method is in sight. There is only the unreliable recollection of the elders among us to compare today's enthusiasm, morale and zeal for psychotherapy to those accompanying the introduction of the bromides, for instance. There is no instrument to show, quantitatively or qualitatively, differences in attitudes toward the new drugs and attitudes which were evoked by the introduction of insulin treatment, metrazol, electric shock and psychosurgery. There is a good, strong clinical impression that today's enthusiasm never was paralleled in the past in duration or intensity. It is the sort of impression—but better evidence for various reasons—that an "old inhabitant" may display in declaring that today's winters are less severe than winters used to be. (It might be remembered that this once unsubstantiated recollection has finally been supported for most of the United States by reasonably reliable weather data!) What reasonably reliable data on treatment we can collect—statistics, clinical reports, informal comments, professional papers and public announcements—support the view that today's therapeutic faith and enthusiasm are unprecedented. If this is so, it seems reasonable to attribute the fact to the properties and results ascribed to the new drugs; thus, it is a reaction secondary to the properties themselves. It is a reaction pointing to a rather general conclusion that we have in those drugs something considerably better in the way of treatment of mental ills than science has ever known before.

This is not to deny the need for continued rigorous, alert, even skeptical, examination and inquiry. It is also neither to overlook nor minimize the fact that there are therapeutic "nihilists" and that comparatively poor results have been reported where the new drugs have been administered by "nihilists." But a good, earnest therapeutic nihilist could probably get poor results in certain somatic disorders by half-hearted treatment with standard antibiotics; and the new drugs' therapeutic nihilists are—by virtue of appearing in exceedingly small proportions—among the best evidence of the drugs' inherent therapeutic properties.

At this point, we come out by the same door wherein we went: In the interests of future intelligent discussion, what are these new drugs anyway? The best descriptions are so far compounded with negative elements or indirection. We know these drugs are not hypnotics or sedatives—or that they do not act like any familiar ones if they are. They do not seem to produce habituations and, unlike

the bromides, are not cumulative and are not highly toxic in repeated dosage. They are definitely not properly described as "tranquilizers"—for reasons already discussed. They are not anticonvulsants or anything else with which psychiatry has previously been familiar. With all proper respects to the committee on public information which worked so long and so hard for the American Psychiatric Association, it may be doubted if they are truly "ataratic." A truly ataractic agent would abolish anxiety; and, while the new drugs undoubtedly affect the patient's expression of anxiety or his reaction to it, there is considerable reason to doubt if they abolish it. "Phrenopraxic," as indicating merely effect on the mind, is perhaps the least open to criticism of the suggestions made so far. But phrenopraxic—as has already been noted—can be interpreted in a very broad sense; as a drug influencing or affecting the mind or brain, mescaline or alcohol could be called phrenopraxic. If "tranquilizer" and "ataractic" are inaccurate, we could do with a narrower and more specific term than "phrenopraxic."

We could also do with a great deal more research into exactly what the new drugs are and how they operate. Those in most general use are of two separate and unrelated groups, the Rauwolfia and phenothiazine groups. And there are others, from still other sources. They have, or appear to have, certain common properties, for which we have no acceptable descriptive terms.

Where the new psychiatric drugs are concerned, both researcher and clinician are in the empirical or raw data stage of inquiry and application. If one administers this or that, so and so happens. Such a stage may not be extremely disquieting, but it is not the *summum desideratum*. There is a gap between medication and psychological effect which is not entirely unlike the gap between nervous system structure and mental function. We are reconciled to vast expenditures of time and energy before we can expect to have the knowledge to close that latter gap. But a similar break between medication and the result of medication is not to be accepted with carefree resignation by the physician. And at the moment, he does not even have acceptable "fictions" (in the philosophical sense [15]) to serve as bridges. The physician lacks, where the new drugs are concerned, the sort of "fiction" which Frank defines, quoting Francis Bacon, as a system of statements from which the observed facts can be derived by mathematical reasoning, even though the statements making up the "fiction" are not intelligible in themselves. The raw data have not even reached the point—unless psychologists and biochemists have made advances not generally known—where such a system of explanatory statements can be made. Or to put it as Webster's dictionary does, it is not possible yet to make the "fiction" of a "convenient assumption, as by passing over what is not disputed, and arriving at the points at issue," for we do not know enough about what is happening to know what it is logical to assume, or even what points are at issue—what a drug actually does, for instance, that does not sedate and does not "tranquilize." There are acceptable "fictions," which may be scientific truth or may not be, where the actions of insulin, metrazol, electric shock and psychosurgery are concerned. We need to reach a similar point in investigation of the new drugs before we can advance with any assurance that we know what we are doing. After that, we may proceed from "fiction" to development of a theory—something more soundly based on understanding.

If two totally unrelated groups of drugs have similar—though not identical—results as medication, they must either share some common principle, or they must eventually bring about similar action after following diverse paths. It is the task of research and more research to find out which is the answer, if we are to make the best use of the drugs already available, or if we are to find the principles to guide our search for new ones of equal or greater worth. Without such knowledge, time will be wasted in investigating, and clinical effort will be lost in administering, substances which lack whatever is the essential quality, which fail therapeutically, and which, perhaps, will reflect discredit on the effective agents we now use. Confusion between the new drugs and our old-time hypnotics, sedatives and anticonvulsants is encountered as matters stand—at least occasionally. And it is another and more important task of research to sort out from these drugs of familiar action more drugs of the newer type of action represented by the Rauwolfia derivatives and chlorpromazine.

It is also important—and it should not shake any enthusiasm that is based on a firm foundation—to remind ourselves insistently and incessantly of the necessity to maintain a calm, detached, scientific attitude, and to estimate all new and existing evidence with at least a scant measure of scientific skepticism and an overflowing measure of scientific impartiality. The evidence now avail-

able seems overwhelming and conclusive as to the unprecedented merits of the new drug treatments. But we need much more—and much more time—before we stick our necks out and crow any louder about it. Psychiatry has had its ill-founded enthusiasms over everything from the rest cure to an overestimate of psychosurgery. Psychiatry has had more than one spate of remarkable successes accompanying new therapies, only to have remissions and improvements drop back to a dull average level when the new therapies were examined realistically and overenthusiasm subsided. There seems very good reason to believe that that sort of thing is not happening again. But psychiatry has hoped for so long—and often in vain—that there is great temptation to overrate success when it comes. However convinced we may be by clinical impression and cold statistics that this is not just another one of those things, we owe it to our patients, to the public and to our selves to remember that we have been mistaken before, to see that whatever we claim now is supported by the evidence, and to make certain that new evidence is there before we make any future claims.

It is a different, but related—because also psychological—task to maintain the high enthusiasm, the therapeutic optimism and the energetic will to treat the patient which now prevail. For these blessings, the new drugs can be thanked; and one may both hope and believe that today's healthier therapeutic atmosphere will prevail as long as the new drugs are used with care and discrimination—and as long as they and their actions are not confused with those of bromides and barbiturates and the failures of sedatives and hypnotics that terminated treatment enthusiasms of the past.

To this end of avoiding confusion, we need to know what sort of a rose is a rose is a rose is a rose. For the first time, we appear to have medication to deal effectively with certain difficult mental states; but it is important to know what sort of thing we have and where and how we can develop more things like it. A Montague is not a Capulet, or a brass door knob-plate, or a stained glass window, or a girl's name. If we are to maintain and develop the happiest state of affairs in psychiatric memory, if we are to continue the formidable and imperative task of searching for more and better pharmaceuticals of the kind we are now using—and at the same time pursue fresh basic research paths—the sooner will we know what sort of a rose is a rose is a rose. And the better we and our patients will be for it.

VALUE TO HOSPITAL STAFFS

Dr. KLINE. Dr. Bigelow states:

What has been going on can be seen in almost any mental institution. The administrator is carrying his burden with straightened and less-weighted shoulders.

The clinical director talks with enthusiasm instead of apathy. The senior staff member acts as if psychiatry were a worthwhile specialty after all. The resident has new interest, energy, and enthusiasm. The nursing staff is alert and expectant. The attendants, the solid foundation of any hospital, are encouraged and hopeful. A great shrouding of gloom has lifted; there are glimpses, at least, of the sun.

I particularly like his last sentence:

The legend over the gates, "Abandon Hope," has been amended by striking out "Abandon."

Although the confirmation of the efficacy of the so-called psychopharmaceuticals was delayed by the failure to carry out the systematic investigation, by now, not only the psychiatric but the general medical profession has accorded wide acceptance to this group of medications.

PROPOSAL FOR WIDE EVALUATION OF PROGRAM

A belated proposal that the widespread evaluation be undertaken within the next year or two is now being considered. Although I argued most ardently for this some 4 years ago I would like to point out that at the present time it is too late to undertake such an investigation since the data obtained would be not only of little value but would unquestionably be highly misleading.

At the time of the original proposal only a few hundred of the 750,000 patients in mental hospitals had been treated whereas at the present time not only have hundreds of thousands of the patients in-mental hospitals have been given drugs but even more hundreds of thousands have been given such treatment outside of the hospitals.

PRESENT STATUS OF TREATED PATIENTS

This means that most of the patients in the mental hospitals capable of responding to the pharmaceuticals presently available have already been successfully treated and are discharged.

At the same time many tens of thousands more given treatment by psychiatrists or general practitioners have been able to avoid the traumatic desocializing experience of being placed in a mental hospital.

Such a study today would be forced to take as subjects the patients who are primarily drug-resistant to the medications presently available and would serve to falsely "prove" that the drugs were not so useful after all. More importantly, the major purpose of such a study, which was the purpose we proposed 5 years ago, the demonstration that the drugs are effective, has already been accomplished.

POSITION OF GOVERNMENT ON EVALUATION STUDY

Another argument against carrying out such a study now is that instead of the two preparations which were available at the time of the original proposal there are now a dozen of phenothiazine derivatives, related to chlorpromazine, presently on the market as well as a number of other derivatives of Rauwolfia serpentina in addition to reserpine itself.

Such a comparative investigation might well place the Government in the undesirable and untenable position of stating that drug A was one-tenth of 1 percent more effective than drug B which might well be due to statistical accident.

Originally a few hundred cases properly studied might nave demonstrated the usefulness and areas of application of such preparations as compared with blanks but only the extensive clinical experience of tens of thousands of physicians with hundreds of thousands of patients will be able to sift out the relative merits of one preparation as opposed to another.

In addition, we know that there are slight differences in the effectiveness of drugs in different conditions but a study large enough to include all of these would be fantastically expensive and, as indicated, would serve little purpose since it is already being done in the course of the widespread use of the drugs.

One cannot do yesterday's research today. Very much more importantly, now that the usefulness of these preparations has been shown, a new and even more pressing set of problems, which I am about to discuss, has been created which must be met as soon as possible. Let us hope that these will not also be deferred. Perhaps this time we can do today's research today.

PSYCHIC ENERGIZERS

I would like to mention that last year I had the opportunity of presenting to this committee, a few weeks after its original presentation, a paper on a group of drugs which we called psychic energizers, which you may possibly recall. We felt that these opened up an entirely new area in psychiatric treatment equivalent to the so-called tranquilizing drugs.

Perhaps it would be of interest to you to know that several hundred thousand patients have been treated since the time of the presentation last year, and the effectiveness of these drugs, particularly iproniazid or marsilid, which we introduced for this purpose has been widely confirmed.

There are now some 50 articles, either in the press or already printed and several hundred more in the process of preparation or print so that the whole field has now been widely opened.

At the American Psychiatric Association meeting, which was last week in San Francisco, I attempted to summarize the developments in this new field, which has been remarkably rapid. The drug is most effective in the treatment of depressions which are probably the most widespread of all of the emotional and mental illnesses.

I would like to submit as an exhibit the paper which I presented there summarizing the work in the field.

Senator HILL. It will be included in the record.

(The information referred to follows:)

PSYCHOACTIVATING DRUGS

(by Nathan S. Kline, M. D., F. A. C. P.)

The introduction of a new group of pharmaceuticals can at times have consequences far beyond their immediate therapeutic value. The psychic energizers appear to have profound consequences for psychiatric diagnosis, theory, and may extend into the area of social structure.

CLASSIFICATION OF THE DRUGS

1. Psychic energizers

We first suggested the specificity of iproniazid, an amine oxidase inhibitor, for depression slightly more than a year ago. Despite the usual delays in publication the acceptance of the drug and the recognition of its efficacy was so immediate that at the time of this publication an estimated one-half million persons have been treated. The therapeutic success of the drug (plus the occurrence of overpublicized side reactions) has led to a wide search for similar acting agents. To date, JB 516 (Lakeside Laboratories, Milwaukee, Wis.) has proved to be the most successful substitute for iproniazid. A number of other preparations such as Ro–1018 (Hoffmann-LaRoche Laboratories, Nutley, N. J.) show promise. Newer compounds appear to have significantly fewer side effects and no liver toxicity has been observed to date.

2. Psychomotor stimulants

This category would include the more familiar pharmaceuticals such as the amphetamines and caffeine as well as methylphenidylate (Ritalin) and pipradrol (Meratran). These drugs differ in a number of significant ways from the psychic energizers: in respect to physical effect they stimulate the motor system whereas the energizers do not; these drugs also tend to increase blood pressure and pulse rate in contrast to the psychic energizers which tend to lower blood pressure and pulse; these drugs tend to be anorexiants whereas the psychic energizers tend to increase appetite; there is also a tendency for this group of drugs to raise the mood above baseline (not infrequently followed by a drop below normal) whereas the psychic energizers do not tend to induce euphoria and there does not appear to be a postmedication depressive phase.

3. Psychostimulants

The search for compounds of the psychic energizer group has led to the identification of another group of drugs which act in a manner highly similar to the psychomotor stimulants except that there are less of the motor effects (which limited the upper dosage range). They can be used, relatively, in very much higher doses. They also possess certain properties of stimulation not identifiable in the psychomotor stimulants. The one traditional drug of this group would probably be cocaine but for a variety of reasons its therapeutic use has never been fully explored. (It was B. B. Brodie who brought this to my attention.) The compound known as G22355 (Geigy Laboratories, Ardsley, N. Y.) and phenyltoloxamine (Bristol Laboratories, Syracuse, N. Y.) are excellent examples of this group. Our limited experience with Deaner (Riker Laboratories, Los Angeles, Calif.) and the combination of meprobamate and benactyzine (Wallace Laboratories, New Brunswick, N. J.) has not allowed us to form a firm impression. The early evidence is that they do not fit into any of the three groups indicated above. However, on the basis of more extensive experience our opinion may change.

Theory and therapy

The much touted conflict between psychological and organic points of view is nonsensical. Even the wildest advocates of the psychogenic origin of disease would have to assume that there was a neuronal or biochemical activity which accompanied such processes since any psychopathology (including depressions) exists in an organism and not in outer space. Similarly the most ardent biochemical adherent would ultimately be aware that it is not the disordered metabolism per se but that it is the expression of disordered thinking, feeling, or acting that lead to the need for psychiatric attention.

The psychopathology may originate on either an organic or a psychological basis. Of those conditions originating on a psychological basis, psychotherapy may prove an effective means of treatment if the condition has not progressed to the point of "psychotherapeutic irreversibility." A comparable example of this would be the development of a duodenal ulcer which might originate because of emotional tension and be subject to relief by psychotherapy in certain stages. After the ulcer had reached a point of marked severity, even though the emotional causes were removed, the pathology would tend to perpetuate itself. In contrast to such conditions of psychological origin, those originating on a purely metabolic basis are usually not amenable to psychotherapy.

Symptoms are the organism's reaction to a disturbance of normal organization (homeostasis). If the organism cannot rapidly compensate for such imbalances, the organization is reestablished at some new level. There are characteristic ways in which this can be achieved to which are given the names of certain syndromes. In psychiatry these syndromes are presently mislabeled as "diseases." True diseases, on the other hand, deal with etiological processes and a single disease may express itself in a variety of syndromes; just as similar syndromes may occur in several diseases.

The identification of a regularly occurring causative process is essential to establishment of a disease. The recognition of the modus operandi of a therapeutic agent is the penultimate step for disease identification. Examples of this would be the effect of insulin on glucose utilization leading to identification of diabetes; antibiotics acting by bacteriostatic action providing disease identification to infection; digitalis acting on the heart muscle and pacemaker relating to cardiac failure or finally the psychic energizers acting by amine oxidase inhibition leading to identification of certain types of depression. We appear to have isolated an essential metabolic process along with a therapeutic approach. This is typical in the history of medicine since the finding of a treatment technique often precedes and in turn leads to recognition, separation, and identification of previously confused syndromes. The old syndrome of "miasmal fever," which was actually composed of malaria, typhus fever, and typhoid fever, is an example. The therapeutic response of malaria to quinine effected not only the treatment of the condition but the diagnostic categories, the theory of infections caused by "night air," and the social habits and structure of whole segments of our population.

In the treatment of depression we have proposed that the psychological change resulting from amine oxidase inhibition is an increase in psychic energy. Previously we have suggested (on less directed evidence) that the ataractics tend to reduce psychic energy. Possibilities of manipulation in this area remove certain conjectures from the realm of speculation and place them in the realm of theory (i. e., testable hypotheses). The identification of the metabolic disorder in primary depressions now seems to be within reach.

DIAGNOSIS

On the basis of clinical experience to date the depressions could be classified as follows:

1. Primary depressions

This is a depression which is being perpetuated on a biochemical basis. The origin may have been organic as is probably the case in the syndromes of manic depression, involutional depression and a large number of milder depressions which (treated or untreated) continue for years on end. Alternately, the genesis may have been psychological but have reached a point where the originating psychodynamic processes are no longer operating but the organic sequela persist in the form of disturbed metabolism reflecting itself in primary depression. It would incidentally appear that those primary depressions which are of organic etiology need continued maintenance doses of the psychic energizers (or, if the depressions are periodic, the energizers must be used to prevent or abort the cycles). Those primary depressions which were originally of psychological etiology frequently do not require maintenance doses.

It is in the primary depressions that the psychic energizers have their greatest effectiveness, whereas the psychomotor stimulants or the psychostimulants are of relatively little use.

2. Functional depressions

These are the end expressions of psychodynamic processes which may originate on purely psychological grounds or follow organic disorders such as coronary occlusion, arthritis, cerebral thrombosis, etc. The important point of differentiation from the primary depressions is that there exists a basic psychological need for the depression which is quite distinguishable from the secondary gain which may occur with primary depressions. In this group of patients the psychic energizers are frequently without effect or at best provide only partial alleviation. On the other hand the psychostimulants or at times the psychomotor stimulants are often capable of providing symptomatic relief and establishing an improved background for psychotherapy or for the spontaneous self-recuperative processes. In contrast to the action of the psychic energizers in primary depressions, the psychostimulants or psychomotor stimulants are nonspecific in their effect on the functional depressions.

3. Concomitant depressions

The impression that the presence of one psychological condition precludes the concomitant occurrence of another is sheer myth. Neuroses and psychoses can coexist as can two different psychoses (e. g. propfschizophrenic) or two different neuroses. Thus depression may coexist with arteriosclerosis, schizophrenia, syphilis, etc. At times the two conditions are mutually interdependent but in other cases may exist in relative autonomy. Whether a psychostimulant or a psychic energizer is indicated would depend on whether the depression was of the primary or functional type.

4. Parasymptomatic depressions

As we have pointed out elsewhere, it is our impression that a depression may manifest itself in reactions other than the emotional motor and mental retardation which we have come to associate with the disease. Some of the syndromes by which depression is made manifest would include (*a*) alcoholism, (*b*) narcotic addiction, (*c*) obesity, (*d*) obsessions, (*e*) compulsions, (*f*) anxiety states, (*g*) somatic conversions. The percentage of patients in these other syndromes who are parasymptomatic primary depressions has not yet been determined. The therapeutic response to the psychic energizers is as satisfactory as the use of this drug is in the primary depressions.

SOCIAL CONSEQUENCES

1. Continued successful development of pharmaceuticals in this field would lead to the management and possibly cure of depression, most common of the emotional disorders.
2. It would also open the way to new theories, experiments, treatments and possibly prevention and prophylaxis.
3. The identification of the chemopathology of depression now seems within our grasp and this in turn would permit early identification and extension of this knowledge to related diseases.

4. A final possibility is that use of compounds of this type might lead to the heightening of "normal" behavior which, it is interesting to note, is a major objective of the second 5-year plan of the Russian pharmacological program.

DRUGS FOR MENTAL ILLNESS

Senator BRIDGES. Mr. Chairman, may I ask the witness a question?

Senator HILL. Senator Bridges.

Senator BRIDGES. Dr. Kline, in connection with the different types of drugs for mental illness, after a reasonable correction has been assured and the patient is released, is it thereafter necessary for the patient to continue with one or more drugs and if so, to what degree?

Dr. KLINE. You asked a very pointed research question. The studies so far would indicate that patients who are kept on low maintenance doses of the drugs have a return rate to the hospital only half as great as patients who do not continue on the drugs.

This does not mean that all of the patients placed on drugs have to be continued.

One of the papers at this conference at which I was a formal discussant, was by a Dr. Tuteur, and he took patients who were on maintenance doses of these drugs and substituted blanks, which the patients were unaware of.

He found that half of the patients who were on these blanks,within a matter of from a few weeks to a few months, had a return of their symptoms and had to be placed again on the drug.

On the other hand, this meant that another 50 percent of them, once they had achieved good improvement, were able to continue without the drugs.

With the newer drugs, the so-called psychic energizers, in addition to marsilid there is an experimental preparation by Lakeside Laboratories, JB 516. With both of these we have found that once the depression is relieved, and in probably 80 percent of the cases, the drug can be discontinued. It does not mean that the patient will have to always be maintained on it for the duration of his life. But there may be cases where this is necessary.

DIFFERENCES IN PATIENT RESPONSE

This, of course, since I am primarily a researcher, leads to some interesting questions as to why one group has to continue on the drug and the other does not. It would lead one to believe that in certain individuals, there is a biochemical or metabolic defect very much like perhaps diabetes, and that the drugs supply or compensate for some deficiency.

These would be the patients who have to continue indefinitely.

On the other hand, there are other patients who respond very much like a person with pneumonia, perhaps, that once the condition is cleared up, they are then able to continue on their own.

So this strikes at really the heart of the problem of mental illness.

In addition to the treatment, it provides some very valuable leads as to the etiology and the cause of mental disease.

I would also like to say, although as is evident in part, I have been critical of the National Institute of Mental Health, that in respect to these psychic energizers, they have been extremely active. They have

already held one or two conferences on these drugs and are planning projects on it.

I am encouraged to note that, this time, with this group of drugs, they are in at the beginning and not trailing after everyone else.

DRUGS TO IMPROVE NORMAL PERFORMANCE

I have one small point, since each of us have hobby horses which we ride, and that is the question of this particular group of drugs in improving normal performance. I have mentioned this a number of times, It was of interest to note an article in a recent issue of Time magazine, which I will provide you.

Senator HILL. For the sake of the record, what issue is it?

Dr. KLINE. It is the March 31, 1958, issue. I have one or two extra copies which I will submit.

Senator HILL. That will be fine.

Dr. KLINE. It is by Gilbert Cant, the medical editor of Time, who is reviewing an article in the Soviet 5-year plan on pharmacology and toxicology.

I was particularly interested since this appeared a number of months after my own proposals. I have no private communication from the Russian 5-year plan. He reviews their 5-year plan from 1956 to 1960.

He says:

A major aim of the Soviet plan, as translated last week by the United States National Institutes of Health, is to develop "pharmacological substances that normalize higher nervous activity and heighten human capacity for work.

He mentions a previous article which they had referred to—our prediction that there should be such drugs. So I am particularly interested that this would be another pharmacological development which has not been utilized to the full.

Certainly if the Russians, who have no scruples about it, are trying these drugs out, we should give them an opportunity, too, to be investigated.

(The information referred to follows:)

SOVIET DRUG RESEARCH

If the Russians can achieve their goal in drug research they will be, in effect, 10 feet tall by 1960. This is suggested by an article in the Moscow journal, Pharmacology and Toxicology, about the Soviets' 5-year plan (1956–60) for pharmacological research. A major aim of the Soviet plan, as translated last week by the United States National Institutes of Health, is to develop "pharmacological substances that normalize higher nervous activity and heighten human capacity for work." In plain English, the Russians are looking for drugs like the psychic energizers foreseen by New York's Dr. Nathan S. Kline (Time, February 24), that will make them supermen.

The report on the drug plan, passed on by the 20th Congress of the Communist Party, also reviewed the previous 5-year period, during which Soviet researchers devoted the bulk of their effort to treating disease, especially emotional disorders, with prolonged sleep. This has not paid off too well, the anonymous authors of the plan conceded. Prolonged, drug-induced sleep "cannot be used as a universal therapeutic measure," partly because sometimes the cure is worse than the disease—it causes fever or anemia.

In the same 5-year period, the Reds reported, they produced many new drugs, including some antibiotics—most of them unrecognizable to NIH experts under the names given. Of the identifiable items, several had been developed earlier in the United States. Concluded the Soviet report: "As regards the high level of [Russian] scientific research, it stands above the pharmacology of foreign

countries, although, as regards the discovery of new and effective medicinal substances, it still lags behind the large capitalistic states."

QUESTION OF HABIT FORMATION

Senator BRIDGES. May I ask another question, Mr. Chairman, please?

Senator HILL. Of course.

Senator BRIDGES. On the tranquilizers, has it been the experience that having taken them for a long period of time it is very difficult for the patient to stop? Are they habit forming?

Dr. KLINE. One has to distinguish between habit forming, dependence, and addiction. They are sometimes all lumped together very much as if we refer to cancer as one disease when actually we mean a whole group of diseases, cancer being only one type.

All of us are habit-forming creatures, whether it is coffee or orange juice. We develop our habits. Dependence means that one needs a particular drug, or possibly morning coffee can become something upon which you are very dependent.

There are some people to whom you should not speak before they have had their morning coffee.

The great danger, which is, I think, what you are implying, is addiction which means that the individual has a physiological change and cannot continue without the medication. In this respect, there has been no evidence that these drugs are addicting. The patients who are removed from them show no major changes if they are removed in gradual intervals as one should remove a patient from a drug.

So that this is one great advantage, for instance, over the barbituate drugs, where there is something very close to addiction, if not true addiction itself. So this is a great advantage of this group of drugs, that they are not addicting in that sense, sir.

Senator BRIDGES. Thank you.

QUESTION OF ADDICTION

Senator HILL. Would you say they are not addicting, perhaps, as many drugs such as aspirin and things of that kind that are used so generally by so many people?

Dr. KLINE. That is correct, Senator Hill. One does not have a physiological craving for them or develop all kinds of unpleasant and painful effects when they are withdrawn.

I might mention that even last night, Mr. Aldous Huxley was interviewed on the Mike Wallace program, and he, too, referred to the use of these various drugs and mentioned that he felt that there were now drugs that would heighten human functioning without any great repercussions, physiological, or I believe he used the words "spiritual or moral."

He is an astute lay observer like Mr. Gorman.

PROPOSED MENTAL HEALTH CONTRACT PROGRAM

The most effective means of consolidating our major gains in this area and making the next step against a disease that until now has sentenced 1 out of every 10 persons to time in a mental hospital is by establishing a mental health contract program to carry out essential research that would not be done otherwise.

In contrast to the cancer contract program, the problem is not finding new pharmaceuticals as such. The effectiveness of the compounds already available and the one-quarter of a billion dollar yearly sales is all the impetus that is needed to guarantee the production of new drugs for treatment of those mental illnesses where initial breakthroughs have been achieved.

UNITED STATES RATE OF MENTAL ILLNESS

Senator BRIDGES. If I may interrupt, did you say that 1 out of every 10 people spend some time in a mental hospital or institution?

Dr. KLINE. That is correct, sir.

Senator BRIDGES. Is the rate higher in this country than in other countries, or how do we rate?

Dr. KLINE. To the best of our knowledge, the number of patients in mental hospitals is higher, but this does not mean that the incidence of mental disease is any higher.

Senator BRIDGES. Is it because we give them better service?

Dr. KLINE. That is correct. Last summer I was privileged to spend some time at a week long study group of the World Health Organization in Geneva, and there were people there from literally all over the world, a group of 10 of us, including a man from Hong Kong, another from Indonesia, another from Peru and Sweden, and so on. The evidence seemed to point out that the incidence of mental disease was pretty much the same the world over.

The facilities for providing treatment and care were pretty much superior here in the United States.

To illustrate the same point, we are presently trying to help one of our neighbors, Haiti, in providing a mental health setup. There they have 4 million people and 1 psychiatrist.

One might argue, therefore, that the mental health of Haitians was much better than that of the United States, since they only need one psychiatrist. Their mental hospital is a converted Marine barracks which houses 250 patients, which is infinitesimal compared with the resources in this country.

I asked with some amazement how they kept the population at 250 patients. The reply was that they had 15 admissions a month, 5 discharges, 5 deaths, and 5 escapes. This kept everything in balance.

This merely indicates that they were not providing the care which was needed. They themselves were fully aware of this and delighted that there would be some help forthcoming.

Actually, a number of the pharmaceutical houses are contributing to set up a more adequate mental hospital and clinic there.

Senator THYE. Mr. Chairman, right at that point I have a question.

Senator HILL. Yes, sir.

RATIO OF PSYCHIATRISTS TO POPULATION

Senator THYE. What is the percentage of psychiatrists here in the United States to our population?

Dr. KLINE. Dr. Goshen would probably have that figure.

Dr. GOSHEN. We have 10,000 psychiatrists to 160 million population.

Dr. KLINE. Which would mean 1 psychiatrist to every 16,000 people.

Senator BRIDGES. Do you have a group of people who are not psychiatrists but who have had training in that field so that you would have to take them into consideration in answering Senator Thye's question?

TREATMENT BY OTHERS THAN PSYCHIATRISTS

Dr. KLINE. You mean are there people other than psychiatrists who treat patients?

Senator BRIDGES. Yes; and can play a part in it.

Dr. KLINE. There are. In the Veterans' Administration, for instance, these psychologists do a certain amount of the treatment. But it is done under psychiatric supervision. I believe this is a very important point.

The independent treatment by nonmedical practitioners is something that I would look askance at. This is not entirely from prejudice since I also have a degree in psychology. I feel that a nonmedically trained individual frequently misses important diagnostic points.

Second, the sense of medical responsibility is not always present. This does not mean that there are no good psychotherapists, but the guaranties that one gets in having someone who has gone through medical school, both as to the sense of responsibility and to picking up other diagnoses is important.

Senator BRIDGES. Following up on that, do we not find a lot of psychotherapists operating under an M. D. in hospitals?

Dr. KLINE. We do, and I would say that this certainly is better than not providing necessary treatment. The thing to which I would take exception to would be having a non-M. D. responsible for the case. This is even more pointed at the present time when drugs are coming into widespread use.

DANGERS OF NONMEDICALLY SUPERVISED TREATMENTS

Senator BRIDGES. I can see that with drugs coming in, there is a necessity for an M. D.

Dr. KLINE. It is also true even without them.

I saw a patient only a few weeks ago in my private practice who had had a number of years of psychotherapy from a psychologist. It was evident after one session, that there was some organic disturbance. It subsequently turned out that she had a thyroid deficiency, but of such a nature that one would have to be an M. D. to pick it up.

In other words, there was dry skin and she complained of her hair falling out, of being cold very easily, things which, if you were not medically trained, you would not specifically relate to a physical condition.

When she was placed on thyroid, after it was confirmed by laboratory tests, her psychiatric symptoms disappeared. So there was an awful lot of psychological psychotheraphy that went to waste when a little thyroid would have saved them $5,000 or $10,000 in 2 years.

This is another reason I feel support should be given to have an M. D. supervise a case.

RELATION BETWEEN BLOOD PRESSURE AND MENTAL ILLNESS DRUGS

Senator BRIDGES. Is there any relationship between the blood-pressure drugs that have been developed and the mental drugs?

Dr. KLINE. There is; it is an interesting one. Reserpine, which we mentioned 5 years ago before this committee, was originally introduced into this country for the treatment of high blood pressure. This was a drug concerning which Dr. Vakil of India, who is the one who published the article which brought it to widespread attention, says that he has been able to trace references back to 2000 B. C. in India describing the use of this drug. It was used for high blood pressure, snake bite, since the root is shaped like a snake, and insanity as well as other conditions.

On the basis of the claims that the drug worked in high blood pressure, which were confirmed by Dr. Wilkins in this country, we tried it on psychiatric patients and found that this claim was also a valid one.

So there seems to be some association. I do not know if it is causal, that one causes the other.

PSYCHIC ENERGIZERS BENEFIT ANGINA

Interestingly enough, the psychic energizers have now been reported as being extremely effective in the treatment of angina, which was a complete surprise to all of us and resulted more or less accidentally from a lecture which I gave in Mexico where Dr. Caesarman from the heart institute there had a number of patients who were depressed possibly as a result of their angina, and since the drug lowers blood pressure rather than raising it as drugs like dexedrine, he felt it safe to try.

He found that in two patients who were depressed, not only did their depression disappear, but so did their angina. He didn't believe this, and he tested 70 more patients with angina. In his report he said that all of them showed improvement.

This work is presently being reconfirmed in the United States, and the early reports that I have seen, although not 100 percent, are so far the most effective treatment against angina.

It is curious that blood pressure and mental disease should be so closely related.

Senator BRIDGES. Is the National Heart Institute doing research on that particular line of drugs?

Dr. KLINE. They are, sir. Dr. Brodie at the National Heart Institute has made some of the major contributions to the psychiatric field which I think is a brilliant example of allowing a good basic researcher to work where his research takes him.

He was not thrown out of the Heart Institute for working on the problem of mental disease. It now has worked around to the fact that he is right back in heart disease again although no one could have predicted this.

RELATIONSHIPS IN RESEARCH

Senator HILL. I may say this: Nothing has impressed me more at these hearings we have had on medical research than the fact that so often when you start out with a research program, trying to get

an answer to one disease, one problem, you may not get the answer to that problem, but it helps you get the answer to another problem.

In other words, just as the human body has many different organs and many different functions, it is in the overall unit. When you get into this field of medical research, you are really working in a unified area. Is that not right?

Dr. KLINE. Yes.

Senator HILL. You may be seeking an answer over here, and you do not get that answer, but what you do find over here gives you an answer over there. I am right about that; am I not?

Dr. KLINE. Absolutely, sir.

Senator HILL. I have been listening to this testimony for some several years now, but I have never been more impressed with that thought than I have been this year of how this whole thing just ties in, so to speak.

Mr. GORMAN. Dr. Kline is a very modest gentleman. He testified before the House committee on reserpine in 1954. I heard him at the New York Academy of Sciences. Nobody would believe that this was effective in mental illness. He was the first to use it in this country. He received the Albert and Mary Lasker award along with Dr. Vakil of India for this great pioneering effort.

I hope some day he gets a Nobel prize for his efforts.

Dr. KLINE. I will continue my point.

CONTRACT PROGRAMS

Our feeling in respect to the contract program is as Mr. Bambach said in the same speech for which he was criticized earlier:

> The drug industry carries on a lot of basic research, but it cannot justify undue emphasis upon research for basic facts without known commercial application.

Later he stated,

> It becomes obvious that the proper balance is reached if the Government's program emphasizes basic research.

BASIC RESEARCH NEEDED IN MENTAL ILLNESS

It is our hope that with the mental-health contract program that exactly this type of basic research can be carried out. What is more badly needed is a systematic investigation of how those drugs, which have been demonstrated clinically to be effective, bring about the changes they do.

At first glance one might ask why the pharmaceutical house producing the drug does not assume this as its own responsibility.

The answer has been given in Mr. Bambach's statement that they are not justified in doing research in this type of basic research.

The answer is a simple one. If the drug is effective the company is primarily concerned with the development of related but different pharmaceuticals which may act more efficiently or prove useful in conditions where they do not have products but other firms do.

If the pharmaceutical house does not have such a drug it certainly is much more legitimately concerned with developing such a product of its own rather than spending large sums in investigation of the mode of action of the product of some competitive firm.

To a limited extent both the pharmaceutical houses and the Psychopharmacology Service Center do support occasional and isolated investigations of the effect of this or that drug on one or another system of the body. Such support, as mentioned, is extremely limited and nowhere has there been a systematic study of even the best known of these products in respect to its effect on the various functions or organs of the body in a manner that would produce comprehensive and meaningful information about their mode of action.

It is obvious that an understanding of how the drug works would provide significant clues as to what sort of pathology had produced the condition in the first place.

FUNDS NEEDED

It is with this in mind that we are requesting the contract program. To carry out a study on any one of these drugs would require an annual budget of a quarter to a half a million dollars.

Again, it is obvious that a pharmaceutical house is not entitled to risk that much money without a commercial product being anywhere in sight.

There exists only a limited number of facilities where such investigations are possible, and these should be pressed into service by providing the additional personnel, equipment, and supplies necessary to accomplish this job.

This could either be done by some of the operating foundations, a few of the State hospital research labs and a few of the university departments. Preference should be given to such places, but it is also necessary to call upon the pharmaceutical industry for its cooperation.

A pharmaceutical house is strongly interested in knowing the motive action of its drug, but cannot justify expending the necessary sums of money.

I have given an illustration of where they might coordinate research on their particular drug by utilizing the psychiatric hospitals and medical schools in their vicinity.

SOURCES OF FUNDS

Senator BRIDGES. Does the Rockland State Hospital of which you are director of research expect Federal funds?

Dr. KLINE. We do get research Federal funds, sir. The National Institute of Mental Health gives us something less than one-tenth of our total research budget.

Senator BRIDGES. That would be roughly how much?

Dr. KLINE. Roughly $50,000 out of a total of $500,000.

Senator BRIDGES. I would be interested to know where the other nine-tenths plus comes from.

Dr. KLINE. Slightly over half comes from the State of New York.

Senator HILL. A legislative appropriation?

Dr. KLINE. By direct legislative appropriation for research. The remainder comes from grants either from philanthropic foundations or from the pharmaceutical industry. We screen a large number of new compounds, and have an arrangement with the pharmaceutical houses that a certain percentage of the grant they give us goes for the drug screening and a certain percentage of it for basic research.

Their grants are all unrestricted; that is, we do not have to spend them for just the drug that is being investigated.

STATE VERSUS FEDERAL SPENDING

Mr. GORMAN. If I may say so, there are comparative figures to answer Senator Bridges' question. The total budget in the House bill for the National Institute of Mental Health is $40 million. New York this year is spending $200 million for the maintenance and care of 122,000 mental patients. So it is $200 million against $40 million.

Senator BRIDGES. But ours is for research and theirs is for care.

Mr. GORMAN. Mainly for care, sir.

I testified before a New York State legislative committee last January, and about 4 percent of their total budget is for research and training, 96 percent of it for care and maintenance.

Senator HILL. Maintenance and care of the patients?

Senator BRIDGES. I am curious, Dr. Kline. You are associated with Columbia. Do you get any funds there?

Dr. KLINE. We do, sir, but I have included in the figures which I gave you that part of the funds which are devoted to our operation at Rockland State Hospital rather than Columbia University, which is a separate entity.

SUMMARY FOR CONTRACT PROGRAM

Therefore, in summary, the request would be for $4 million for this contract program which would allow the investigation of somewhere between 8 and 12 of the new pharamceuticals, which I think would be a major contribution to what is going on.

SUMMARY FOR TRAINING IN BASIC RESEARCH

Summarizing the other request, I would emphasize with Mr. Gorman the need for training in basic research. There are no extensive programs for such training at the present time. Most of the practitioners, residents in training, are being trained primarily for private practice. This means that both the State hospitals and research are badly neglected.

One has to either train people oneself or try to steal them from other places which is not a very productive procedure.

In part, I would raise one serious criticism of the training program in general at the National Institute of Mental Health, and I gather that they hope to have a larger training program in basic research.

The great difficulty is the one Mr. Gorman mentioned before, that training stipends start at $2,400 a year. This may be adequate for someone hoping to go into social work who has an A. B. degree, but for an M. D. who has had 4 years of medical school and 2 years of internship, $2,400 a year is extremely inadequate.

I would suggest that a realistic figure for an individual who had the medical training, the internship, and 1 or 2 years of general psychiatric residency before going into research would certainly be in the $6,000 to $8,000 a year level if there is any hope of getting anyone to train as researchers.

AGE OF TRAINEES

Senator THYE. What would be the average age of persons who would be apt to be in that advanced research study activity?

Dr. KLINE. He would probably be a minimum of 28 years of age and up to 32, I would guess.

Senator THYE. He would be at an age where you could expect him to have a family, and that, without adequate compensation, would neither be fair to the family nor would it be expected of him, even though he possessed the curiosity and the ability to go forward and continue the study.

Dr. KLINE. I could not agree more, Senator Thye.

Senator THYE. You will only deny yourself just about so many years or you will deny the family about so many years, and then after that, why either the wife will insist or the children's demands are such that they must have an income or otherwise the person becomes discouraged or there is a separation in the family.

Dr. KLINE. Certainly. By setting these artificially low salaries you are eliminating not all but certainly the great majority of healthy, well-motivated people.

It is all well and good for someone to say, "If they love research, they will do it anyhow," but the healthy citizen also wants to earn a living. He is willing to make a financial sacrifice, but not go on a dole.

HARDSHIPS UNDER LOW STIPENDS

Senator HILL. Well, Doctor, as Senator Thye has so wisely observed about economic necessities, if you do not meet those economic necessities, you may be creating a mental necessity, may you not, the very thing that we are here to try to prevent?

Mr. GORMAN. When Senator Thye chaired this committee, I remember him asking Dr. Appel in 1953 how some of these researchers could get along on $3,000 a year. His answer was, "They do not have babies."

Senator THYE. That is the serious answer because the mother may be in a job supplementing the income. But there, again, it is not a normal situation in the home, it is not normal to the family relationship. So either you provide or they are not going into that advanced stage as a scientist, one or the other.

Human nature being what it is, they will turn back and say, "I can make my living without this degree or without this advanced scientific knowledge."

Senator HILL. My thought was if you do not have economic normalcy, you have invited mental abnormalcy. Is that not right?

Dr. KLINE. You certainly do.

This is even more true of the researcher because we would want people who had some residency training, so that these people would be even a year or two beyond the others.

Our request for $500,000 is a very modest amount for this.

SCREENING PROGRAMS FOR NEW DRUGS

Finally, the other half million dollars we have requested for screening programs, for new drugs, because at the present time the only way of evaluating these drugs is on psychiatric patients. If one could

develop a laboratory technique instead of being able to evaluate only a few dozen compounds yearly throughout the country, you could literally evaluate tens of thousands of compounds and find certainly more rapidly, more effectively, which ones were useful.

Ideally, we could also tell which patient would respond to which drug. This is the request for the final half million dollars.

In summary, then, this committee by recommending the appropriation of $4 million for a contract service to investigate how the drugs work, one-half million for the development of screening techniques, and one-half million for training research personnel, can enable the Congress of the United States to continue the legislative leadership in the psychiatric field which it has so brilliantly and effectively initiated.

I might add, sir, that this is not an empty compliment. I have indicated that the action of this committee has been extremely effective in getting work accomplished in this whole field, and possibly much more so than you realize. Your initiative has encouraged people, both in the research field and in the legislatures of the various States and in the executive departments to follow similar lines since you have set a precedent.

Senator HILL. Thank you, Doctor.

(The prepared statement of Dr. Kline follows:)

A MENTAL HEALTH CONTRACT PROGRAM FOR DRUG INVESTIGATION BY DR. NATHAN S. KLINE, DIRECTOR OF RESEARCH, ROCKLAND STATE HOSPITAL, NEW YORK ASSISTANT CLINICAL PROFESSOR OF PSYCHIATRY, COLUMBIA UNIVERSITY

Mr. Chairman and members of the committee, when chlorpromazine and reserpine were first introduced for the treatment of mental illness a brief 5 years ago, there was widespread skepticism because there never had been preparations which could effectively alter the course of these diseases on a large scale and it was inconceivable to some that such drugs had really been discovered. Others argued against the use of such medications since there was no place for them in their theories of the origin and treatment of mental diseases. The most vocal skeptics were those who had not used the pharmaceuticals at all or those who had tried them in inadequate doses for inadequate periods of time. On the other hand there were experienced clinicians and researchers who used the drugs and, despite initial skepticism, did not find them wanting in the balance. Because of the tremendous changes such effective agents would have in dealing with the Nation's No. 1 public health problem there was still, a year after their introduction, acrimonious and bitter debate as to whether they did anything that sugar tablets would not do.

It was at this juncture that I had the opportunity of presenting to the present committee the early evidence that these drugs were an important and new contribution to the medical field. Being without rancor or prejudicial preconception this committee decided that the drugs were at least worthy of investigation. To this end you recommended a $1 million appropriation with which a nationwide evaluation could be carried out and another $1 million to be used for individual detailed but related studies.

For whatever reasons the large-scale investigation was never carried out and there were unfortunate delays in getting the whole program underway. Perhaps those responsible felt that the claims to usefulness of these drugs were unjustifiable and by delaying action the excitement would die away and the funds could be used for other more useful purposes. Although the systematic demonstration of the effectiveness of the drugs by means of the proposed nationwide evalutation was not done, nevertheless the action of this present committee served greatly to encourage the legislatures of various States to appropriate many times the $2 million voted by Congress, for the application of the drugs within the State hospitals.

As indicated in my testimony last year, in the State of New York, where the drugs were used relatively early, the discharge rate from the State hospitals in-

creased by some 21 percent. I am happy to report that the improved rate of discharge continued during the past year. This improved rate of discharge has now been noted throughout the country and last year in 43 of the 48 States the number of patients in mental hospitals was less than had been anticipated. I would like to submit as evidence the paper by Brill and Patton (exhibit A) which presents solid statistical demonstration of these facts. By now, all but the most carping critics have now been forced to admit that these drugs do have an effect on the course of mental illness and have a definite role in treatment. In an editorial in the psychiatric Quarterly (exhibit B) Dr. Newton Bigelow, former commissioner of mental hygiene for the State of New York, states much better than I can the present state of affairs:

"What has been going on can be seen in almost any mental institution. The administrator is carrying his burden with straightened and less-weighted shoulders. The clinical director talks with enthusiasm instead of apathy. The senior staff member acts as if psychiatry were a worthwhile specialty after all. The resident has new interest, energy and enthusiasm. The nursing staff is alert and expectant. The attendants, the solid foundation of any hospital, are encouraged and hopeful. A great shrouding of gloom has lifted; there are glimpses, at least, of the sun. The legend over the gates, 'Abandon Hope,' has been amended by striking out 'Abandon'."

Although the confirmation of the efficacy of the so-called psychopharmaceuticals was delayed by the failure to carry out the systematic investigation, by now, not only the psychiatric but the general medical profession has accorded wide acceptance to this group of medications.

A belated proposal that the widespread evaluation be undertaken within the next year or two is now being considered. Although I argued most ardently for this some 4 years ago I would like to point out that at the present time it is too late to undertake such an investigation since the data obtained would be not only of little value but would unquestionably be highly misleading. At the time of the original proposal only a few hundred of the 750,000 patients in mental hospitals had been treated whereas at the present time not only have hundreds of thousands of the patients in mental hospitals been given drugs but even more hundreds of thousands have been given such treatment outside of the hospitals. This means that most of the patients in the mental hospitals capable of responding to the pharmaceuticals presently available have already been successfully treated and are discharged. At the same time many tens of thousands more given treatment by psychiatrists or general practitioners have been able to avoid the traumatic desocializing experience of being placed in a mental hospital. Such a study today would be forced to take as subjects the patients who are primarily drug resistant to the medications presently available and would serve to falsely prove that the drugs were not so useful after all. More importantly, the major purpose of such a study, i. e., the demonstration that the drugs are effective—has already been accomplished.

Another argument against carrying out such a study now is that instead of the two preparations which were available at the time of the original proposal there are now a dozen of phenothiazine derivatives (related to chlorpromazine) presently on the market as well as a number of other derivatives of Rauwolfia serpentina in addition to reserpine itself. Such a comparative investigation might well place the Government in the undesirable and untenable position of stating that drug A was one-tenth of 1 percent more effective than drug B which might well be due to statistical accident. Originally a few hundred cases properly studied might have demonstrated the usefulness and areas of application of such preparations as compared with "blanks" but only the extensive clinical experience of tens of thousands of physicians with hundreds of thousands of patients will be able to sift out the relative merits of one preparation as opposed to another. In addition, we know that there are slight differences in the effectiveness of drugs in different conditions but a study large enough to include all of these would be fantastically expensive and, as indicated would serve little purpose since it is already being done in the course of the widespread use of the drugs. One cannot do yesterday's research today. Very much more importantly, now that the usefulness of these preparations has been shown, a new and even more pressing set of problems, which I am about to discuss, has been created which must be met as soon as possible. Let us hope that these will not be deferred. Perhaps this time we can do today's research today.

The most effective means of consolidating our major gains in this area and making the next step against a disease that until now has sentenced 1 out of every 10 persons to time in a mental hospital is by establishing a mental-health-contract

program to carry out essential research that would not be done otherwise. In contrast to the cancer-contract program, the problem is not finding new pharmaceuticals. The effectiveness of the compounds already available and the one-quarter of a billion dollar yearly sales is all the impetus that is needed to guarantee the production of new drugs for treatment of those mental illnesses where initial breakthroughs have been achieved. It would, in fact, be a definite infringement on the prerogatives and initiative of the pharmaceutical industry to replace or subsidize these specific areas by Government support. There is no need for support of an activity already being vigorously pursued.

One major aspect of the problem, however, is beyond the capacities of private industry to handle, and because of its paramount importance to the health and welfare of our Nation does call for congressional support. This is the systematic investigation of how those drugs which have been demonstrated clinically to be effective bring about the changes that they do. At first glance one might ask why the pharmaceutical house producing the drug does not assume this as its own responsibility. The answer is a simple one. If the drug is effective the company is primarily concerned with the development of related but different pharmaceuticals which may act more efficiently or prove useful in conditions where they do not have products but other firms do. If the pharmaceutical house does not have such a drug it certainly is much more legitimately concerned with developing such a product of its own rather than spending large sums in investigating the mode of action of the product of some competitive firm.

To a limited extent both the pharmaceutical houses and the Psychopharmacology Service Center do support occasional and isolated investigations of the effect of this or that drug on one or another system of the body. Such support, as mentioned, is extremely limited and nowhere has there been a systematic study of even the best known of these products in respect to its effect on the various functions or organs of the body in a manner that would produce comprehensive and meaningful information about their mode of action.

It is obvious that an understanding of how the drug works would provide significant clues as to what sort of pathology had produced the condition in the first place. This in turn would open up the whole vista of preventive psychiatry at the biochemical and organic level. Since no certainty exists as to where and how the drugs act (whether even on the brain or the glands, or possibly elsewhere) the research would have to be quite extensive. Because of our diagnostic problems in psychiatry, the patients on a particular drug should be studied in respect to multiple functions at the same time and determination made of the differences between those who respond favorably and those who fail to do so. Since a single such study would require an annual budget of a quarter to half million dollars it is obvious that a pharmaceutical house is not entitled to so risk its stockholders' money. But the need for such an advance is one of such great public welfare it seems appropriate to look to this committee for endorsement and recommendation in order to convert the need into an answer.

There exist only a limited number of facilities in this country where such investigations are possible, and these should be pressed into service by providing the additional personnel, equipment, and supplies necessary to accomplish this job. There are a few operating research foundations, a few State hospital research laboratories and a few university departments that could do the work. Preference should be given to such places but it is also necessary to call upon the pharmaceutical industry for its cooperation. A pharmaceutical house is strongly interested in knowing the mode of action of its drug but cannot justify expending the necessary sums of money. Perhaps in a particular city where such a drug firm is located there exist a number of medical schools and/or mental hospital research facilities, none of which alone has the supervisory personnel or facilities to do such a systematic investigation. The pharmaceutical house (which would be motivated to carry the project to completion in a thorough fashion) might then serve as the coordinating center.

Obviously all information obtained in this manner would be available to the general medical and scientific public and provision should be made for its publication as well as for the publication of the proceedings of annual or semiannual meetings of the principal scientists engaged in the several projects. As indicated above, this would open the way for new advances in therapy, for fuller understanding of mental disease, and for the development of methods of preventing such conditions. It is urgently requested, therefore, that $4 million be provided for this purpose and specifically designated for such use along with the necessary congressional authorization for the establishment of such contracts. This would provide the wherewithal to support a major investigation of each of the most important drugs (between half a dozen and a dozen).

In the foregoing discussion reference was made to the limited number of places capable of carrying out systematic psychiatric research at the present time. This points up one of the frightening deficiencies in the field. Until the advent of the new drugs there existed virtually no market for psychiatric researchers who were not of the psychosocial orientation. Overnight the more broadly oriented investigators have suddenly come into great demand. Since the few who were available were quickly snatched up, the experts from other fields were pulled in to fill the vacuum. This was done with great avidity since many of them felt that they could do a much better job than the psychiatrist, anyhow. Since most of them were not biased by the facts about mental illness and had little or no psychiatric experience, they are learning (or in some cases, not learning) that perhaps psychiatric research is not as simple as it looked from the outside.

Training programs to provide competent psychiatric research personnel are startlingly inadequate. The few such programs in existence are heavily weighted on the academic side with little or no fieldwork providing sustained opportunities for actually carrying out the activity of research itself. Nor do psychiatric researchers come from general psychiatric training programs since most of these are so oriented that the primary stress is on individual psychotherapy. Most trainees are excellently prepared to go into private practice with the result that sufficient psychiatrists for the mental hospitals and for research are simply not being provided. There are literally dozens of vacancies for psychiatric research personnel and it is extremely important that people be trained to assume these responsible positions since it is to research which we must look for the important steps in the future.

The only reason it is possible to carry out the contract program mentioned previously is that there are a few institutions with adequate top research personnel who could be supplied with the additional technicians, supplies and necessary equipment. Wherever possible, such places as these should be provided with training programs in order to make provisions for the future expansion in this area. A few places for such research training are for the first time becoming available and those charged with this responsibility in the NIMH hope to have funds to initiate such programs. To this end I would urge that an appropriation be made for research training, and that it be specifically designated that such a background should include both theory and practical experience in the important techniques now available. Five hundred thousand dollars for this purpose is a minimum to be expended to encourage the development of future researchers.

Despite the tremendous need for better compounds and for drugs that will help the new unreachable patient—at most a dozen or two compounds can be adequately screened in the course of a year. This is because no dependable correlation has been found between laboratory tests and the results of treatment. Thus there is great need of encouraging investigation and development of psychological, biochemical, physiological, or other test devices which correlate with drug response. Systematic investigations of this type have difficulty in finding support since at the present time not very conclusive evidence can be presented to demonstrate that any specific procedure being investigated will produce a useful method.

For instance, we have been experimenting with two such techniques ourselves—one of them for almost 5 years, but administrative justification is presently lacking to expend limited research funds for such a purpose. On the other hand, should a screening device be found the results would be of almost incalculable value. One of the tests we are working with (supported in part by the Albert & Mary Lasker Foundation) is a biochemical one. The other is an attempt to clarify a technique in which the growth of micro-organisms and also of certain plant kernels are inhibited in the presence of blood serum from schizophrenics as contrasted with those of normals. Unfortunately the present results are far from clear cut and while some think they are accurate, other investigators have not been able to duplicate these findings.

If, however, improvements could be made so that the tests were routinely successful there is some evidence that by the addition of certain psychopharmaceutical drugs the roots would then grow in a normal manner. This would make possible the rapid determination of which particular drug would be most effective in the treatment of a particular patient. It would further mean that thousands or tens of thousands of compounds could be screened each year since human clinical trials would be unnecessary for this preliminary work. Further, this is a much sounder approach than using normal animals, normal humans, or testing animals or humans who had been given some drug to produce psychopathic

behavior. One would be using the response of the sick patient himself. This might then also provide an index of the degree of improvement and further might allow us to pick up individuals who were potentially schizophrenic or otherwise mentally ill and by appropriate treatment make it possible to prevent overt breakdowns.

Finally there might be the possibility of identifying what substance there was in the blood of the schizophrenic which was inhibiting the growth of the microorganisms or the roots which might be an invaluable lead as to cause and treatment. I stress that these are not present day realities but the tests described, as well as a number of others, present just enough provocative evidence to make one wish that more funds and equipment were available for developing new tests or for exploring those presently available more thoroughly to determine if they could be modified in such a way as to make them more reliable than they are at present.

In the course of the past few years the Psychopharmacology Service Center of the National Institute of Mental Health has made commitments for a sizable number of investigations in respect to the drugs so that even the $2 million presently available for this purpose is inadequate. However, if approximately $500,000 were made available specifically for the development of such screening devices the limited number of grants already operating in this area could be transferred from the present psychopharmacology budget to the mental health contract program thus allowing for the normal healthy expansion of basic research activities.

In summary, then, this committee by recommending the appropriation of $4 million for a contract service to investigate how the drugs work, one-half million for the development of screening techniques, and one-half million for training research personnel can enable the Congress of the United States to continue the legislative leadership in the psychiatric field which it has so brilliantly and effectively initiated.

Indian Health

STATEMENT OF HON. FRANK BARRETT, A UNITED STATES SENATOR FROM THE STATE OF WYOMING

Indian Health Hospitals

Senator Hill. Senator Barrett.

Senator Barrett. Mr. Chairman, I have a prepared statement that I would like to file and just take a few moments of your time, if I might, to summarize.

Senator Hill. We will be happy to have your statement appear in full in the record.

Senator Barrett. Mr. Chairman, gentlemen, I am here today on behalf of some funds for the Indian health hospitals pursuant to Public Law 151 of the 85th Congress. We have 3,800 Indians in 2 tribes in Wyoming. An old reservation hospital was built on there approximately 50 years ago by the Indian Bureau. About 5 years ago, just at the time of the transfer of the hospitalization program on the reservations from the Indian Bureau to the Public Health Service, this hospital was closed. At the time that it was closed the statement was made by the Indian Bureau and also by the Public Health Service, that better facilities could be arranged and accomodations made for the benefit of the Indians by working together with the hospitals in Lander and Riverton which are two towns very close to the reservation.

Since that time Riverton has built a very fine modern hospital, but has not completed it entirely. Lander is in the process of building one at the present time. Lander has raised through bond issues and contributions from the local citizens $360,000 and the hospital will cost somewhere in the neighborhood of $660,000 or $700,000.

HOUSE ALLOWANCE INSUFFICIENT

The House Appropriations Committee put an item in the bill for $750,000 to implement Public Law 151 of the 85th Congress.

The situation simply resolves itself down to this: That there is not enough money in that item to take care of the needs of the various reservations where the Public Health Service has made surveys and are acquainted with the situation. Consequently, we need to have that item increased materially if we are going to take care of Wyoming and other Western States where hospitalization services are needed for the Indians.

It seems to me, Mr. Chairman, that that item ought to be increased from $750,000 to $4 million.

I am advised that that amount of money will provide hospitalization for the Indians in those areas where they are badly needed and where the surveys are completed and the need for facilities for the Indians themselves has been determined.

So, Mr. Chairman, it seems to me that something ought to be done at this time to implement that Public Law 151. It is a bit unfair to ask the people of my State to provide adequate beds for the Indians on the reservations, particularly when the Government itself closed the Indian hospital on the reservation with the promise that arrangements will be made to help in the construction of hospitals in these two communities.

AMOUNTS NEEDED

It will take about $300,000 for Lander and about a third or half of that amount for Riverton if the Indians on the reservation are provided with beds to take care of their needs in the years ahead.

It is not intended, Mr. Chairman, that the Indians will be segregated from the white population. This is a community enterprise and they will be provided with beds wherever they might be in the hospital.

I subscribe to the plan, I think it is wise. But it seems to me that 5 years is long enough to wait for some action by the Government after the closing of the hospital on the reservation.

That is about all I have to say, Mr. Chairman. I appreciate any action that this committee will take.

Senator HILL. Senator, may I say that we know your deep interest in adequate medical care for our Indians, and we very much appreciate your appearance here this morning. You'll be interested to know that we have some of the testimony, all of which sustains the fact that we should do more, we should provide additional funds for hospitalization and for better medical care for Indians. I might say that we had two Indians appear—an Indian brave and an Indian squaw. Is that all right to say?

Senator BARRETT. That is quite all right.

Senator HILL. And they certainly made splendid presentations. Your testimony strengthens and fortifies what they said to our committee. We want to thank you for your courtesy.

I think you will find the committee very sympathetic.

Senator BARRETT. Thank you, Mr. Chairman. I am sure of that and I appreciate it too, Senator Hill.

(The statement referred to follows:)

STATEMENT BY SENATOR FRANK BARRETT ON HEALTH, EDUCATION, AND WELFARE

Mr. Chairman, I appreciate the opportunity to appear here this morning to support the House action providing funds for the construction of Indian health facilities pursuant to the provisions of Public Law 151 of the 85th Congress.

The House committee intended that the $750,000 increase over the budget request "be available for the purposes of Public Law 151" which authorizes the Surgeon General to provide financial assistance to public agencies for the construction of community hospitals when such assistance provides needed hospital facilities to Indians more effectively than direct Federal construction.

Under that law funds may be made available for the construction of Indian health facilities along with funds from other sources, for the construction of facilities which would serve both Indians and non-Indians.

The House took the position that joint-use funds were needed and provided $750,000 to get the program started. To my way of thinking, Mr. Chairman, this amount falls far short of doing the job that needs to be done.

It seems to me that funds for this purpose should be increased from $750,000 to $4 million so that the construction of all proposed facilities presently needed and ready for construction can be carried out. The House committee in its report stated that it was "convinced of the merits of this program."

There is great need for Public Law 151 funds in Wyoming. The Arapahoe and Shoshoni Tribes are located on the Wind River Indian Reservation in central Wyoming and adjacent to two Wyoming communities, Riverton and Lander. The combined population of the tribes is in excess of 3,800.

The reservation is located in Fremont County which is one of the larger counties in area of our State, with a population of 20,000 including the Indians. For a good many years the Bureau of Indian Affairs conducted a hospital on the reservation but it was closed about 5 years ago. Since then the Indians have been obliged to use the facilities available to them at Lander and Riverton. It has been necessary for both communities to build new hospitals. The Riverton Hospital has been built. The necessity of providing hospital care to the Indians of the reservation has placed a rather heavy burden on the small and therefore limited facilities of these communities.

At the present time, Mr. Chairman, the town of Lander—which is also the county seat of Fremont County—is completing its plans for a $660,000 hospital. The local community is contributing $360,000 toward the construction of this new facility through the approval of a bond issue and donations of $100,000 from local citizens.

Indian occupany at the present Lander Hospital constitutes 38 percent of the patient load and, accordingly, it is indicated that at least 15 of the 40 beds at the new facility will be occupied by Indians.

I am informed that the Public Health Service and the Bureau of Indian Affairs have jointly developed a plan to meet the requirements of Public Law 151 and it is estimated that 15 additional beds will be needed at Lander to take care of the Indians on the Wind River Indian Reservation.

Therefore, Mr. Chairman, I am very hopeful that this committee will give favorable consideration to my request that $4 million be appropriated for use under Public Law 151 and that $300,000 be earmarked for the Fremont Memorial Hospital at Lander.

In addition to the hospital facilities at Lander, a good many of the Indians on the reservation will use the splendid facilities of the Riverton hospital from time to time, and as a consequence, I am quite certain that as many as 25 beds will be needed in both Riverton and Lander to supply the hospitalization needs of the Indians on the reservation. Consideration therefore could well be given to the completion of additional hospital beds in the Riverton hospital to properly care for the hospital needs of all of the members of the Shoshone and Arapahoe Tribes. In order to do so, Mr. Chairman, it will, of course, be necessary to set aside an additional sum for the Riverton hospital.

Many years ago, the Federal Government assumed the obligation of providing hospitalization for the Indians on the Wind River Reservation, as was right and proper. I indicated earlier that the Government closed the hospital on the reservation 5 years ago over the vigorous protest of the Indians. Representations were made at the time to the effect that the Indians would be provided with better hospitalization through arrangements with the people in Lander and Riverton when new hospital facilities were constructed in those towns. In my judgment, the Indian Bureau and the Public Health Service are therefore under obligations to provide adequate hospitalization for the Indians in both Lander and Riverton.

Thank you very much, Mr. Chairman.

MENTAL HEALTH ACTIVITIES

AMERICAN PSYCHIATRIC ASSOCIATION, WASHINGTON, D. C.

STATEMENT OF DR. CHARLES E. GOSHEN, M. D., DIRECTOR, GENERAL PRACTITIONER EDUCATION PROJECT

BUDGET FOR NATIONAL INSTITUTE OF MENTAL HEALTH

Mr. GORMAN. Our final witness is Dr. Goshen. He has a prepared statement.

Senator HILL. We will have your statement in the record in full. Then you proceed in your own way.

Dr. GOSHEN. Mr. Chairman and members of the committee, I am Charles E. Goshen, M. D., a physician and psychiatrist, employed as the full-time director of the general practitioner education project at the central office of the American Psychiatric Association. The following statement represents the concepts of our membership of 10,000 American psychiatrists, and, unofficially, the attitudes of the 25,000 physicians who compose the American Academy of General Practice with whom our education project is in liaison. This project has been in operation for the past year, and is designed to find ways to develop greater interest in and knowledge of psychiatry among the Nation's family doctors.

We wish to speak to the subject of the fiscal 1959 budget of the National Institute of Mental Health, and in particular, we would like to ask your consideration of the matter of increasing the amount requested by the administration for (1) training grants, and (2) research grants.

NUMBERS NEEDING MENTAL HYGIENE

Because of the astonishing victories which American medicine has achieved over the old cripplers and killers of people, namely the infectious diseases, our country's No. 1 public health problem has become mental illness. Fifty percent of our total hospital beds are filled with these patients, or a total of 650,000. There are at least 8 million more people who are in need of some sort of mental hygiene care short of hospitalization. As psychiatric knowledge advances, more and more people seek, or could benefit from psychiatric assistance, not so much because the incidence of psychiatric problems increases, but because more people are seeking help early in the development of their difficulties.

This is a most desirable trend for the simple reason that they can be helped more effectively when seen early than they can if their problems develop to the serious stages which require hospitalization. To meet the challenge of the growing numbers of enlightened people who seek early assistance, we are encouraging the development of new approaches to psychiatric care which employ facilities outside of the standard mental hospital.

PERSONNEL SHORTAGE FOR NEW CONCEPTS FOR FACILITIES

These new concepts involve the day hospital, the sheltered workshop, the half-way house and the community clinic. The number of psychiatrists is, and probably always will be, in critically short supply.

For example, we estimate that the mental hospitals of the country are staffed with only 45 percent of the psychiatrists needed to do a minimal job. In many populous areas of the country there are no psychiatrists at all. If we were to staff the hospitals in the State of Massachusetts alone with the same ratio of doctor to patient as exists in one well-staffed hospital—the Massachusetts Mental Health Center—we would need the entire 10,000 membership of the APA.

When we consider the availability of psychiatric personnel to meet the needs of our population outside of the institutions, the shortages are even more drastic. About one-third of our membership work outside of institutions, but the potential reservoir of patients outside exceeds the number in the hospitals by at least 10 times.

TRAINING ANSWER TO PERSONNEL SHORTAGE

The answer to this personnel shortage would appear to be that of increasing the number of psychiatrists in training. However, it would take another 15 or 20 years to double the present number and that increase would scarcely take care of the predictable increase in the general population. Although we think such measures are important, and in time will help, we feel that more immediate measures need to be taken meanwhile.

Unfortunately, in the past, our medical schools have placed very little emphasis on psychiatric training for medical students and interns. As a result, our quarter of a million practicing physicians are left largely to their own devices after graduation in getting any substantial psychiatric training. We feel that the number of practicing physicians is so large in comparison with the number of psychiatrists, and their distribution so much more equitable that they are the logical ones to enlist in the battle against mental illness. Fortunately, we have a great deal of enthusiastic support for this, especially from those physicians who compose the American Academy of General practice

TRAINING PRACTICING PHYSICIAN

Offering the practicing physician ways by which he can expand his psychiatric knowledge so that he can handle a larger share of our Nation's psychiatric problems in an enlightened way can have an impact on this pressing problem in a very short period of time. We could predict that a large-scale movement in this direction, such as we have already started on a limited scale, could be effective in reducing the number of new admissions to mental hospitals by 5 to 10 percent per year, and that this effect could be noticeable within the first year. Even more important, but more difficult to measure, could be the overall improvement in human relationships, decline in divorces, decrease in juvenile delinquency, and increased productivity and morale of the large number of people who now just barely manage to get along with our complex society.

SHORTAGES IN CHILD PSYCHIATRY

The most glaring shortage present in our psychiatric ranks is in the field of child psychiatry, where we have only 300 fully trained doctors working. Because the general practitioner of medicine has many opportunities to see the children of our population, he is in a uniquely

favorable position to bring about preventive mental health measures which could succeed in reducing the demand on the specialists' services.

LASKER FOUNDATION CONTRIBUTION

During the past year, the generosity of the Mary and Albert Lasker Foundation has provided the money for us to set up the general practitioner education project. In cooperation with the members of the American Academy of General Practice, we have managed to organize and stimulate a surprising amount of interest on the part of the family doctor in obtaining more psychiatric training. We feel that the various courses which are being given around the country, and the other educational mediums which we, and others, are developing will achieve a great deal toward the enlistment of all our Nation's physicians in the mental health movement. In order to carry out this program on a suitably large scale, certain funds might be made available through the National Institute of Mental Health's training and research grant programs. At the present time, no money is available for training grants as applied to general practitioner education.

Senator HILL. Your experience shows that you get good cooperation from the general practitioners?

Dr. GOSHEN. Those physicians who give us cooperation give us good cooperation. Of course the ones we really come in contact with are cooperative ones and they seem to be in larger numbers. There still exists that large body that we do not see that we would like to reach who are not yet cooperative.

Senator HILL. But those that you do cooperate with, as you say, give you good cooperation?

Dr. GOSHEN. They surprise us with their degree of sophistication on these matters and their willingness to learn.

Mr. GORMAN. As a matter of record, the committee on psychiatry of the American Academy of General Practice was only a temporary one 2 years ago. It has now been elevated to a permanent status. They are looking for a full-time man comparable to Dr. Goshen and a number of training institutes have been sponsored by State Academies of General Practitioners. This has all happened within the last 2 years.

INSTITUTE'S RESEARCH BUDGET

Dr. GOSHEN. The second area in which we would like to direct your attention is in relation to the NIMH budget for research. Unfortunately, the administration budget recommends a reduction rather than an increase over last year, and this would appear to be an oversight which we hope Congress will correct.

NEEDS FOR CONQUEST OF MENTAL ILLNESS

Ultimately, we will be able to lick the problem of mental illness when we put our efforts, money, personnel, and ingenuity to work in tackling the question of prevention. Typhoid fever, for example, had ceased being a public health problem in this country even before we found an effective cure for it, and this came about by developing large-scale preventive measures. Psychiatric problems are treatable

today, but they could be prevented in greater numbers than we can cure them if we began to develop a preventive program. So far, we psychiatrists have paid relatively little attention to preventive measures, probably because we have been so immersed in treatment problems. The appropriate area in which mental health research needs to take place is in this very new and unexplored field of preventive psychiatry. Although the National Institute of Mental Health is doing a great deal to both stimulate and finance research in psychiatric treatment, little if anything is being done to start a movement toward research in prevention. We, therefore, suggest that the NIMH be allotted funds to establish the leadership necessary to get this sort of trend underway. It seems unlikely that the initiative will come from other sources within the foreseeable future. Preventive research is, admittedly, a very long-range undertaking but unless we start now we are going to find ourselves burdened in the future with a paralyzing number of our people in mental institutions when it might be too late to start a prevention program. The Russians, for example, are paying more attention to prevention than they are to treatment, and although this emphasis results in neglecting many people who need help today, it might be successful in greatly reducing the number who need help tomorrow. Our prosperous country should be able to afford to do both, that is, putting an adequate amount of our resources to bear on the problems of treatment, and also paying attention to those things we can start doing in the direction of prevention.

RECOMMENDATIONS

The administration budget proposes no increase over the previous budget for the operation of the seven Institutes of the National Institutes of Health. Moreover, there is an actual decrease in the amount requested for the National Institute of Mental Health. This is in spite of the known fact that the extremely valuable activities of the latter are still quite youthful and going through their vital growing stages, when more help, not less, is needed.

We would specifically suggest that, instead of the proposed decrease, Congress appropriate an increase of 30 percent over the fiscal 1958 budget, bringing the total up to about $55 million. Ten percent would be for increased costs. Ten percent for programs financed in previous years, and 10 percent would be needed to undertake logical expansion of the program.

We further request that part of this increase be earmarked specifically for training grants which will enable general practitioners of medicine to take advanced psychiatric training, and that another sum be allocated for research in preventive psychiatry. The balance of the increase would then be apportioned to strengthen the present training and research program.

We note that the House has passed a bill which provides $2,700,000 over the administration budget, making a total of $40,397,000. Although this is a step in the right direction, it actually provides barely enough extra money to take care of the increased costs over the past year. We would hope that the Senate committee would carry this move further so that the NIMH receives for fiscal 1959 an amount which represents a realistic expansion of one of the most valuable programs sponsored by the Federal Government; namely, the activ-

ities of the National Institute of Mental Health. Let us remember that our people's health, happiness, and prosperity are at least of equal importance to our Nation's security, and the work being done, or to be done, in the field of mental health is irretrievably interwoven in the total fabric of these features of our society. The few dollars needed to expand the work being done is less than the amount being spent to develop a single airplane instrument. Let us not be short-sighted now, and very sorry later on. I would like to add without taking your time to read it, but hope that you might have a chance to look through it sometime, something that we have prepared called The Current Status of Psychiatric Training for Practicing Physicians.

Senator HILL. We would be happy to have that for the record following your remarks.

(The information referred to follows:)

THE CURRENT STATUS OF PSYCHIATRIC TRAINING FOR PRACTICING PHYSICIANS
BY CHARLES E. GOSHEN, M. D.

The general practitioner education project started a survey of the current status of postgraduate psychiatric training on November 15, 1957. Questionnaires were sent out to the various county medical societies and by January 1, 1958, the 244 returns disclosed the following:

A. Availability of training opportunities:

1. Twenty-seven percent of these county medical societies are located within a distance of 50 miles of a medical training center.
2. Twenty-nine percent are located between 50 and 100 miles of one;
3. Twenty-nine percent are between 100 and 200 miles of one;
4. Thirteen percent are between 200 and 500 miles of one;
5. Two percent are farther than 500 miles away from one.

This indicates that about 60 percent of the societies are located within 100 miles of a medical training center, which would be about the maximum distance which could be conveniently traveled for the purpose of participating in a postgraduate course. These figures are somewhat misleading in that those societies closest to the training centers are also those which are closest to the bigger cities, and have a much larger membership than the more remotely located societies. It would be a reasonable guess that 75 percent of the physicians are located close enough to a medical center to partake of postgraduate training there

B. The actual psychiatric material made available to these medical societies, either through their own resources, or from outside the societies revealed the following:

Psychiatric courses, lectures, films, etc., available at the county level during the years 1955–57:

1. Fifty-four percent had no educational material in psychiatry.
2. Fourteen percent had only 1 psychiatric lecture in 3 years.
3. Eight percent had 2 lectures in 3 years.
4. Thirteen percent had 3 lectures or courses in 3 years.
5. Two percent had more than an average of 1 course or lecture a year.

Aside from the interest which might or might not be shown in psychiatric courses, at least two-thirds of the physicians have had no opportunities for participation in psychiatric training on a local level, except for a rare, single lecture. Those societies which do start a psychiatric program seem to continue it annually.

The county societies rated the interest shown in psychiatric material, as compared with material from the other medical specialities as follows:

1. Fifty percent estimated the interest in psychiatry was equal to the interest shown in other specialty courses.
2. Forty-five percent stated the interest in psychiatry was less.
3. Five percent stated the interest shown in psychiatry was more.

In general, the larger societies, representing the larger communities, were the ones where interest in psychiatry was equal to or greater than the interest in other medical subjects.

C. The societies were asked to rate their relative interests in several different training techniques as applied to psychiatric material. The following list shows

how these various techniques appealed to the physicians. They are ranked according to their popularity:

1. Most interest in—
   (a) Lectures or courses by visiting psychiatrists.
   (b) Discharge summaries on expatients from mental hospitals.
   (c) Psychiatric seminars for general practitioners at AMA meetings.
   (d) Motion pictures on psychiatry for county meetings.
   (e) Printed material having a practical application.
2. Less interest in—
   (a) Greater coverage of psychiatry in State society meeting.
   (b) Information service, by mail, for psychiatric problems.
   (c) Tapes or records for county meetings.
   (d) Weekend courses with family in vacation settings.
3. Least interest in—
   (a) Lectures or courses by local psychiatrists.
   (b) Closed-circuit TV contact with nearest medical school.
   (c) Open house yearly at local mental hospitals.
   (d) Weekend courses within 200 miles of county.

Having found that, the most popular method turned out to be the one employing visiting psychiatrists, the GP project has set up a speakers bureau for APA members. The APA membership solicited for suggestions as to where and when individual psychiatrists would likely be during their holiday travels so that they could be put in touch with local groups seeking speakers for their programs.

D. The societies were also asked to rate the objections of their members to participating in psychiatric education. The overwhelmingly large objection was "not enough time." This, of course, can be considered as a standard excuse when the real reasons are not superficially apparent. The next most common objection was "nothing available." This is certainly a valid reason in the vast majority of situations. Other objections expressed but not as often as might be expected were "material usually impractical," and "psychiatrists not understandable." It would seem that, if more educational material were made available, and some efforts were made to stimulate interest, that a much larger share of the Nation's physicians would seek postgraduate training in psychiatry than is now the case.

E. More interesting, and perhaps more revealing of the current status of attitudes to psychiatry are the following samples of the many remarks made on the questionnaires:

"Many members resist psychiatry because of their own need for psychiatric treatment." (Remark made by a psychiatrist who is secretary of his county society.)

"Although few psychiatric programs have been given, interest is great."

"Remotely located physicians rely on attendance at State and National meetings for their postgraduate education."

"GP's do not recognize psychiatric problems, and therefore do not appreciate their need for further training."

"GP's practice good, basic commonsense psychiatry, and tend to steer away from the more academic type."

"The true value of early recognition of psychiatric problems is not realized."

"We need the same knowledge of psychiatry that we have of the other specialties, which cases the GP can handle and which must be referred."

"Many physicians talk about getting more psychiatric training but few do anything about it."

"There is a lot of interest in the subject, but little interest in the actual treatment of the psychiatric patient."

"Psychiatry as usually taught by psychiatrists is not applicable to general practice."

"The psychiatric material in the AAGP Journal is especially helpful."

"We need a closer participation in the actual training methods."

"Other subjects seem more interesting, especially economics."

"Films are good ways to stimulate interest."

"Group is only interested in organizing for economic purposes."

"Very difficult to get psychiatrists to help us set up courses."

"Local State hospital holds an annual 'open house', but does not invite the local physicians (Illinois)."

"M. D.'s do not realize how much psychiatry there is in general practice."

"Psychiatrists and urologists are the most interesting speakers."

"Most GP's are afraid of psychiatry."

"We are constantly looking for psychiatric courses but find nothing available."

"Very few GP's are interested in anything outside their own field, and feel psychiatry is remote from their practice."

"GP's are confused about what is a psychiatric problem."

"An excellent lecture series was offered recently by a local VA hospital (Massachusetts) and practically no outside MD's attended."

"Few GP's take any interest in any kind of postgraduate training."

"A course given recently in our State hospital had as many teachers attend as students."

"We need more psychiatry, but cannot get MD's to attend."

"The psychiatry we hear is not up to date."

"GP's have no idea of what is going on today in psychiatry."

"GP's want 'practical' material."

"We were not properly oriented to psychiatry in medical school."

"Two local psychiatrists have such a bad name with the physicians that it stifles interest in psychiatric courses."

"Many of our MD's are prejudiced against psychiatry."

"GP's are not really interested in general practice, they all want to specialize."

"We need a multicounty health center for referrals and guidance (Iowa)."

"Many MD's admit their ignorance of psychiatry but do not do anything about it."

"Interest can be aroused, but not sustained."

"Psychiatric speakers we have had are not practical."

"Planning a course in psychiatry, but find no show of interest."

"Never had any contact with a psychiatrist who was interesting."

"Only AAGP members are interested in education."

"Psychiatric patients are unrewarding to the GP."

"Need more clinical, less theoretical, material."

"Only the younger M. D.'s seem interested."

"Average M. D. knows so little about psychiatry that he does not realize how little he does know."

"Nothing available, but would welcome something."

"Physicians who graduated before 1940 (most of us), show no knowledge of or interest in psychiatry."

These attitudes could probably be summarized as follows: Most physicians come from medical school with very little knowledge of or interest in the mental health principles inherent in the practice of medicine. Nevertheless, there is a considerable amount of curiosity about the subject, stimulated more by forces outside of medicine than from within. Little effort is made to satisfy the curiosity that exists because either nothing is available of a practical, understandable nature or there is a certain kind of emotional resistance to exposing oneself to getting more information. Much of the fault for this lies with the medical schools, undoubtedly. The fact that the medical schools often recognize this and are now doing something about it is shown by the fact that, almost universally, the younger physicians are most receptive, and the older ones most resistant to psychiatric training.

F. Some interesting examples of postgraduate psychiatric training, or other types of psychiatric orientation, which have been and are being offered to the physicians are listed:

1. In the State of Washington, the AAGP chapter is in the process of setting up a closer liaison with the State hospitals and the local physicians. In addition to orientation lectures, and daylong seminars, one county society is being selected as a pilot group to experiment with ways of handling the followup care of mental patients in general practice.

2. In Nebraska, the department of psychiatry of the University of Nebraska gives annual seminars for general practitioners, combining them with closed circuit TV presentations and with the State AAGP branch.

3. The State Mental Hygiene Department of Nebraska is experimenting with the use of local M. D.'s offices and facilities for use as followup clinics for discharged mental hospital patients.

4. In New Jersey, the various medical and psychiatric societies and State hospital (Carrier Clinic and the New Jersey Neuropsychiatric Institute) have collaborated for the past 3 years in series of weekly lectures and daylong seminars in psychiatry. They have been well attended and enthusiastically supported.

5. A private psychiatric hospital at Winetka, Ill., has sponsored a series of psychiatric courses annually for general practitioners. The proceedings have been, and are being published.

6. The University of California Medical School has sponsored courses for general practitioners which were well supported, especially by the California AAGP.
7. A tricounty medical society near San Francisco employs a full-time psychiatric social worker to assist its members in handling psychiatric problems.
8. The University of Pittsburgh (Pa.) is developing psychiatric education for general practitioners as a permanent feature of its education program.
9. The Rochester (N. Y.) Regional Hospital Association sponsors psychiatric courses for physicians 2 to 3 times per year.
10. The Gulf Coast Society of Psychiatry and Neurology (Florida) offers a course each year for general practitioners.
11. A circuit course which includes psychiatric, as well as other material, covers most of Kansas, and eastern Colorado. It emanates from the university medical school.
12. Dr. Theodore Watters (psychiatrist) in Louisiana has evolved a unique method by which he meets weekly with a small group of local physicians for very intimate conferences on the psychiatric problems seen in medical practice. This has been quite successful, but, of course, depends largely on Dr. Watters' own initiative and skill in keeping it going so well.
13. Some of the drug companies have made films available to medical societies which reach large numbers of physicians, although their message is necessarily a very limited one.
14. A State hospital in Oklahoma (western) gives an annual research report to local physicians which attracts a lot of interest.
15. The Maryland branch of the AAGP presented an unusually good and well-attended full-day session on everyday problems in psychiatry in 1957.
16. The California AAGP supplies guest lecturers to local meetings.
17. The Lafayette Clinic (Detroit) offers courses in psychiatry for local physicians.
18. The University of Minnesota gives an elaborate series of continuation courses, including psychiatric material, which are highly respected and well attended.
19. The University of Missouri is starting a 4-year program of postgraduate education to be available to local medical doctors.
20. The University of Colorado offers a course once each year in psychiatry, for general practitioners.
21. Two county mental health associations (Staten Island, N. Y., and Weld County, Colo.) are known to have collaborated with the local county medical societies in sponsoring mental health programs of an educational nature for the public.
22. Some of the States, and Canadian Provinces, have evolved interesting and effective liaison with the local physicians in developing aftercare programs for discharged mental hospital patients. These are described in the GP project's report, State Programs for the Aftercare of Discharged Mental Hospital Patients.
23. The mental health council of the AMA has now had 2 annual, 2-day meetings on mental health problems, the recent one (November 1957) including a full-day roundtable on psychiatry in general practice.
24. In the spring of 1957, the New Hampshire State Hospital initiated a course for general practitioners along experimental lines. The interested support it received has led the hospital to plan to make this an annual affair.
25. The Hunterdon Medical Center (Flemington, N. J.) has an interesting arrangement as a part of its general training program. There, a child psychiatrist makes regular rounds on the medical and surgical service with local general practitioners, using these occasions to teach clinical material.

SUMMARY

As far as interest in postgraduate psychiatric training is concerned, there is perhaps as much, and sometimes more interest in this subject as in other medical subjects. Where apathy exists, there tends to be a corresponding lack of interest in any kind of postgraduate medical training. Those physicians who are most interested tend to be the ones who are active in the American Academy of General Practice.

In comparison with other medical subjects, there tends to be fewer opportunities for educational material in psychiatry, although there is a pronounced trend toward the development of new facilities.

Medical schools, in the past, have done relatively little toward arousing interest in the application of mental health principles to medical practice. Recently, however, there has been a growing trend in the direction of increasing the emphasis

on psychiatry in medical education. The result of this is that the more recent graduates tend to be the ones most interested in advancing their psychiatric education.

It is probably reasonable to conclude that a large part of the resistance which exists toward obtaining more psychiatric sophistication is based on personal emotional factors.

Much of the contact which physicians have with psychiatry is with the institutional type, and this phase of psychiatry tends to be both unpopular with practicing physicians, and appears to them as very remote in its application to their practice.

EMPHASIS ON PROGRAMS

Senator HILL. Is there anything else you would like to add, Mr. Gorman?

Mr. GORMAN. No, Mr. Chairman, I think that completes our statement. As you realize we are emphasizing this year I believe two things; the drug industry contract program in psychiatry and the very important training areas, mostly the training area of a specific mandate to the National Institute of Mental Health for the training of general practitioners. We are deeply grateful to you, Senators, and chairman of the committee, for the time you have given us.

Senator HILL. Is there anything you would like to add, Dr. Kline?

Dr. KLINE. I am most appreciative of the opportunity to appear here.

Senator HILL. I want to thank you, Mr. Gorman, and you, Dr. Kline, and you, Dr. Goshen, for your testimony here this morning. This testimony has been most informative and most interesting and instructive in the strong and forceful presentations and you have certainly been helpful to this committee. We are grateful to you and want to thank you very, very much.

NATIONAL HEART INSTITUTE

HARVARD SCHOOL OF PUBLIC HEALTH, BOSTON, MASS.

STATEMENT OF DR. FRED STARE, HEAD OF NUTRITION DEPARTMENT

INCREASE FOR HEART INSTITUTE

Senator HILL. Dr. Fred Stare, head of nutrition department, Harvard School of Public Health, Boston, Mass.

Doctor, we welcome you here. We are very happy to have you and we will be glad to have you proceed in your way. Do you have a prepared statement?

Dr. STARE. I do not.

As Senator Hill mentioned, I am professor of nutrition at the Harvard School of Public Health and head of the department of nutrition at Harvard. I am also an associate in medicine at the Peter Bent Brigham Hospital, editor of a monthly scientific journal known as Nutrition Review, and the director of an active group of enthusiastic individuals numbering about 50 who essentially devote full time to various researches on atherosclerosis.

When Senator Thye was handing out a doctor's degree to Mr. Gorman a little while earlier, I believe either he or Senator Hill mentioned that Dr. Bronk had a medical degree.

Senator HILL. I mentioned the fact.

Dr. STARE. I might add that I have both a doctor of philosophy and a doctor of medicine degrees, a doctor of philosophy degree earned almost in Minnesota, at the University of Wisconsin, and my doctor of medicine from Chicago. I am a licensed physician in the State of Massachusetts, and for some reason, also in the State of Missouri.

AMOUNT REQUESTED

I would say that my comments and appearance here today are as a private citizen requesting an increase in funds for the National Heart Institute, namely a total budget of $49,529,000 rather than $34,803,000, the 1958 appropriation. This represents an increase of $14,726,000 and is the amount requested in the so-called citizen's budget.

This modest increase in funds would make possible a number of what to me would be considered desirable items that could be attacked in this most important disease in that it is the principal killer of this civilization, western civilization.

It would make possible 25 percent overhead on these grants rather than the present 15 percent, which is very important to do before our universities and medical schools go further in the red because of the increased research they are doing which we would want them to do.

Second, it would make possible the beginnings in establishing a contract program with pharmaceutical chemical firms for the search of compounds that can lower blood cholesterol, the search for things such as nonfeminizing estrogens, the search for compounds that conceivably can dissolve clots in the vascular system.

This would be something like a contract program which you people were partly instrumental in starting in the cancer field.

Third, it would make it possible for the payment of worthwhile research projects which have already been approved by study sections of the National Institutes, but which have not been paid because of insufficient funds.

Fourth, it would make possible increased training in fellowships.

Fifth, and I think most important, it would make possible increased studies on the important role of diet and nutrition in this disease. This is the phase that I am particularly interested in because I think it offers a considerably practical approach.

ROLE OF DIET IN HEART DISEASE

We do know that diet and nutrition have a lot to do with the development of this type of heart disease. If we know enough about it, it is possible to suggest changes in diet and nutrition.

Now you gentlemen are certainly aware, and I am sure are proud of the tremendous accomplishments that have been made possible in medicine and medical research during the last decade because of the research and training funds made available to the National Institutes for farming out to the university research laboratories and for the support of work in their own laboratories out in Bethesda.

This work should continue and should be modestly increased for the people of this country as well as of the world who will reap the benefits in improved health, happiness, and production.

We will get these increased funds back in larger amounts because of added taxes on increased income from increased earning power of more people.

ATHEROSCLEROSIS

Atherosclerosis is a type of arteriosclerosis involved in coronary artery disease, the most common type of heart disease, and in cerebral or brain artery disease, leading to what we commonly call strokes.

In fact, what we commonly refer to as coronary thrombosis, heart attack and cerebral thrombosis are strokes. These two have essentially the same background as atherosclerosis, and you could consider them as the same disease.

In one case, the arteries of the heart are affected and in the other the arteries of the brain. Thus, atherosclerosis is by far our greatest killer. It should have our greatest financial support in conquering it, and it can be conquered.

POSSIBILITY OF CONQUEST OF DISEASE

Why do I say it can be conquered? Well, for this reason: Ten years ago atherosclerosis was considered pretty much a fatal, hopeless disease. We called it a degenerative disease, one of the diseases of aging. But then about 10 years ago, people began to realize that there are really millions of people in this world and different parts of the world where this commonest disease in this country is really a very rare disease.

If this is a very rare disease in parts of Africa, in parts of South America, in parts of Arabia, if it is a very rare disease there, it must mean that it can be prevented.

So people began studying some of the differences between people in other parts of the world and people in this part of the world.

One of the factors that has come into this problem so strikingly is the difference in the type of diet. You can hardly pick up a newspaper or a popular magazine today without finding some article dealing with the role of diet and nutrition and having something to do with this disease.

In fact, I could call your attention to an article of mine which is in the current issue of McCall's magazine which is entitled "Can You Eat Yourself into a Heart Attack"?

The point I should like to make is that food and nutrition do have a lot to do with this disease.

BASIC AND ENVIRONMENTAL FACTORS IN DISEASE

If you would take the various factors that we know to be involved in the causation of atherosclerosis, you could divide them into two main categories. You could speak of basic factors and environmental factors.

Under the basic factors, you have such things as genetics and heredity, race, age, sex, and body type. We cannot do much about these things. I cannot do anything more about my appearance than you can do about your appearance. I cannot change my sex and I cannot change my age. But these are factors which are involved.

In addition to the basic factors, we have things which we call enviromental factors. These we can change. The environmental

factors that conceivably have a role in this disease are: stress and strain, whatever that is, tobacco comes into the picture, exercise comes into the picture, and diet comes into the picture.

One of the important things that has been discovered in the last half dozen years is the realization that atherosclerosis is a disease of a number of causes, and these causes seem to be additive.

For example, if an individual has a strong hereditary history of cardiovascular disease in his family, if this individual is overweight, if this individual is a heavy smoker, if this individual has a high level of cholesterol in his blood, if this individual has a little increase in blood pressure, these five factors are known to act in an additive fashion.

If you have a favorable history with regard to cardiovascular disease, if your parents lived into their seventies and did not die of cardiovascular disease, if you are not overweight, if you do not have an elevated blood pressure, then I think it probably makes no difference whether you smoke or how much you smoke, because you only have 1 or 2 of these things.

It is when you have 5 of these factors or 4 of these factors that the effect is particularly bad.

USE OF EXPERIMENTAL ANIMALS

One of the phases of research where I think we will get a long way in this decision is the development in just the last 3 years or 4 years of the use of monkeys as experimental animals in atherosclerosis. The monkey is a primate, and you and I are primates and our physiology and biochemistry is much more like that of monkeys than it is like that of rabbits and dogs and the other animals commonly used for experimental research.

There have been very few laboratories that have so far used monkeys for research in heart disease. There has been a tremendous use of monkeys, as you know, in the development of the polio vaccine, but not in research on heart disease and atherosclerosis of the brain.

I think the one item which our laboratory at Harvard is particularly well known for is the report in 1953 of the experimental production of atherosclerosis in the monkey. We have continued to push that work and are continuing to push it. We did do something within the last 2 months which might interest you people. That is, the monkeys we use for this work come from South America.

We have been having considerable difficulty in getting monkeys. We recently sent our pathologist down to Colombia and made arrangements in Colombia with two of Colombia's scientists to actually make an expedition out into the jungles of South America for the purpose of trying to get as many different species of monkeys as we possibly could to see if we might find one species of monkey in which this disease occurred naturally.

We were very gratified to find, when our pathologist returned to Boston only about 3 weeks ago, that of the 8 or 9 different species of animals which they were able to shoot, one species, something that is commonly called the woolly monkey, does have a lot of atherosclerosis occurring naturally.

ADVANTAGES OF MONKEYS AS RESEARCH SUBJECTS

Furthermore, this monkey has had the added advantage in that it is quite a lethargic animal, and because of that, becomes reasonably obese. The monkeys that we have had in the past have never been able to get fat. Here we have a primate in which this disease appears and occurs naturally and where we also find a fair amount of fat. We think we can make the animal fatter so that we can add experimentally the complication of overweight which is, of course, what happens in you and me, that is, in man.

So we are most interested now in trying to develop ways and means of getting together a supply of woolly monkeys.

Actually, we are going to take our research in monkeys, most of it, and do it in Colombia rather than in Boston. We have made arrangements with a very excellent medical school in a town called Cali, Colombia, which has been heavily transfused with dollars in the last few years by the Rockefeller Foundation and the Kellogg Foundation and I think without doubt is destined to become the greatest medical school in Latin America.

The monkeys come from near there and we are going to try to do our work on this particular phase down there.

ADDITIVE FACTORS

I mentioned a little while ago in talking with Senator Thye about these factors being additive. To give you a little example of how we also try to do things of practical importance in this field, I developed a statement about it this past fall which I entitled "A Statement for Guidance" and "How To Try To Lessen Your Chances of Being a Victim of Arteriosclerosis and Its Main Killers—Coronary Thrombosis (Heart Attack) and Brain Thrombosis (Stroke)."

I was motivated mainly in preparing this statement as I mentioned earlier to you of the fact of the sudden death of my wife just a year ago tomorrow from atherosclerosis. I prepared this statement and mentioned the fact that there are five known factors involved in this condition; heredity, overweight, elevated blood cholesterol level, elevated blood pressure and excessive cigarette smoking.

When I say "excessive cigarette smoking" I do not imply that that causes atherosclerosis, as the tobacco people are always very prompt to point out, but I do say, and there is excellent evidence to support it, that those people who are heavy smokers of cigarettes are more apt to have this disease.

QUESTION OF CIGARETTE SMOKING

Senator THYE. Doctor, why the cigarette? Is it because it is more often inhaled when smoked? Of course, I am an old smoker. I smoked from the time I was 17 and I would inhale almost any kind of smoke. I inhaled cigarettes incessantly. I did inhale a pipe occasionally, but not as often. Therefore, I ask the question: Are you more apt to inhale that smoke than you would a pipe or a cigar?

Dr. STARE. The answer to inhalation is certainly "Yes," but I would not be able to say that the inhalation of the smoke is the causative factor. The reason why cigarettes are involved in this is largely a statistical factor because cigarette smoking is so much more

prevalent than any other type of smoking. All that has been shown is that the people who are excessive cigarette smokers are more apt to develop this disease. Maybe people who are excessive cigarette smokers do a thousand other things that are unknown and yet involved in this condition.

Senator THYE. What about chewing, such as tobacco?

Dr. STARE. As far as I know there is no evidence of any kind that any other type of use of tobacco is involved in this condition. I think it is purely on a statistical basis—the number of cigarette smokers are tremendous compared to the use of any other type of tobacco. I could give you a specific figure.

There was an interesting paper published in the 1954 New England Journal of Medicine by Dr. Samuel A. Levine, who is one of the country's greatest cardiologists, on the average age coronary disease occurs among physicians who smoke and physicians who do not smoke. His figures as I recall, were that the average onset of heart disease in smoking physicians was 58 years of age and of nonsmoking physicians was 63 years of age. Every one of these statistical studies that have been done in the last half dozen years on some relationship between cigarette smoking and cancer of the lung have also shown that coronary artery disease is far more prevalent in those who smoke.

The point I was going to make about this statement was that I thought that this statement would be far more effective and believed, let us say, by more physicians to whom I really was directing it if I could get two or three of my friends who are very eminent cardiologists to agree with what I had put down being primarily a researcher and not a practicing cardiologist. So I got together with Dr. Paul Dudley White and Dr. Samuel Levine and Dr. Howard Sprague, all three of whom are very distinguished cardiologists. Much to my pleasant surprise they agreed with every single word that I had written so that this statement for guidance which was released at the press conference sponsored by the National Health Education Committee in October and appeared in the paper the next day is a statement that is subscribed to not only by myself but Drs. Levine, Sprague, and White.

(The information referred to follows:)

A STATEMENT FOR GUIDANCE BY FREDRICK J. STARE, M. D.; SAMUEL A. LEVINE, M. D.; HOWARD B. SPRAGUE, M. D.; AND PAUL D. WHITE, M. D., BOSTON

Arteriosclerosis and its main killers—coronary thrombosis (heart attack) and brain thrombosis (stroke)—is by far the leading cause of death in the United States and in most other countries of western civilization. Recent and current researches provide hope for improved treatment of arteriosclerosis and possibly for preventive measures. The following statement of guidance summarizes useful information on these points. While we realize that a definitive statement may be modified, at least in part, by future research, nevertheless, we believe that on the basis of current evidence and our experience this statement provides information that will prolong life for many at this time.

HOW TO TRY TO LESSEN YOUR CHANCES OF BEING A VICTIM OF ARTERIOSCLEROSIS AND ITS MAIN KILLERS—CORONARY THROMBOSIS (HEART ATTACK) AND BRAIN THROMBOSIS (STROKE)

Factors which predispose you to arteriosclerosis, heart attack, and stroke are—

1. Hereditary: Did either of your parents or grandparents suffer from or die in the prime of life or earlier from these diseases? See your physician.
2. Overweight: Are you more than 10 pounds above your desirable weight? See your physician.

3. Elevated blood cholesterol level: See your physician.
4. Elevated blood pressure: See your physician.
5. Excessive cigarette smoking: Do you smoke too much? See your physician.

Hard work itself, including stress and strain, is often wrongly blamed for this disease. In fact, regular, moderate, physical activity appears to lessen the hazards of atherosclerosis.

If you have a strong hereditary background regarding arteriosclerosis of the heart and brain, it is most important that you minimize the effect of the other factors. You are "stuck" with your heredity, but you can influence the other factors, and hence lessen your chances of being a victim of arteriosclerosis. Consult your doctor, and if desirable, try to reduce to your proper weight, try to reduce your blood pressure, your blood cholesterol level, and your smoking.

This statement, signed by the foregoing physicians, has been initiated by the National Health Education Committee, Inc., New York City, as a public service to enable the use of knowledge presently available to lessen the chances of falling victim to coronary thrombosis (heart attack) and brain thrombosis (stroke). Arteriosclerosis of the heart and brain is our No. 1 killer. There were 843,410 deaths in 1956 from heart and circulatory diseases, mostly caused by arteriosclerosis.

Signers of the statement:

Dr. Paul D. White, president, International Society of Cardiology; emeritus professor of medicine, Harvard Medical School, Boston.

Dr. Samuel A. Levine, physician emeritus (consultant in cardiology), Peter Bent Brigham Hospital; clinical professor of medicine emeritus, Harvard Medical School, Boston.

Dr. Frederick J. Stare, professor of nutrition, Harvard University School of Public Health; associate in medicine, Peter Bent Brigham Hospital, Boston.

Dr. Howard B. Sprague, lecturer on medicine, Harvard Medical School; physician, board of consultation, Massachusetts General Hospital, Boston; past president, American Heart Association.

RESEARCH FACILITIES

Dr. STARE. There are two other items that I would like to mention to you gentlemen. I would imagine they are not in the jurisdiction of this particular committee.

Senator HILL. Go right ahead.

Dr. STARE. I think they certainly should be of interest to you gentlemen as Members of the Senate.

One, we certainly have to have some place for funds for research and teaching facilities, construction of laboratories, places to do the work. I believe $30 million a year was appropriated for the last 3 years. I think we are in the third year now.

Senator HILL. This bill would carry those funds, Doctor, for the next fiscal year.

Dr. STARE. It would?

Senator HILL. But the basic legislation does have to be extended. But the authorization is operative for the fiscal year beginning July 1. This bill will carry those funds. So you are entirely addressing yourself to a matter before this committee at this time.

HELP FOR EDUCATION AT ALL LEVELS

Dr. STARE. Second, as a private citizen, and a taxpaying citizen I am most interested in having our Government spend more funds for help in education at all levels, primary schools, secondary schools, and certainly our professional schools.

TECHNICAL ASSISTANCE IN FOREIGN AID

The second point I would like to make which might be interesting to you gentlemen as Senators and not as members of this subcommittee is the importance of technical assistance in our foreign-aid program. Nothing wins friends in other parts of the world like technical assistance for improvement in health, agriculture, and education. Our foreign aid program as far as I know is somewhere in the range of 3 or 4 billions of dollars. How much of this is for technical assistance I do not know, but it is only a few millions of dollars.

Senator HILL. It is a very small amount.

Dr. STARE. In connection with activities of the World Health Organization, also with some activities of the Rockefeller Foundation and some in connection with Harvard University, I have been lucky enough in the last 10 years to see a fair amount of this world. I have spent 3 or 4 months working in Indonesia in 1952. I have done a little work in Thailand. I have been in India. I have been in many parts of Africa. About 2 weeks ago I just got back from a trip to Colombia and Peru.

Senator THYE. Doctor and Mr. Chairman, I would like to ask a question.

Senator HILL. Certainly.

Dr. STARE. Certainly.

Senator THYE. Were you with the Federal Government on those assignments?

Dr. STARE. At times I have been with the Federal Government, in the International Cooperation Administration which is what it is called now. A couple of years ago it was Foreign Operations. It started out as point 4. So, on some of these trips, I have been under the auspices of the Government.

Senator THYE. When you were not under the auspices of the Government, under what auspices were you?

Dr. STARE. Under the Rockefeller Foundation, the World Health Organization, or Harvard University.

Senator THYE. Doctor, I agree completely with you on the technical assistance in some of these fields that you have mentioned, health, improving the standards of living, and giving them opportunities. I think some of the world unrest is that the youth of that country today is aware that something exists beyond what he is privileged to have and that is a little mud in a rice paddy. I found it in Thailand as you found it in some of those countries. That youth is alive to the fact that there is a modern existence on the part of some because he sees the plane in the air, the automobile on the avenues, and a magazine available to him, the same as it is to the other youths. He is alive to what is happening out beyond his little environment.

Dr. STARE. I would like to give you just two specific examples. We were all incensed, I'm sure, at the shoddy treatment accorded our Vice President a couple of weeks ago. I happened to give a series of lectures in San Marcos University in Lima, Peru, the same university where the students did not think too much of Mr. Nixon when he arrived just 3 weeks ago. There were about 250 students in the audience in the medical school of San Marcos. I do not think I have had a more interesting attentive audience. I cite that as an example of the interest of young people in matters of health and medicine.

Senator THYE. May I ask this question? Did you speak in their language?

Dr. STARE. I spoke through an interpreter.

HOSPITAL RUN BY RUSSIANS

The second example I would like to give is simply this: I was in New Delhi, India, approximately at the end of last November for the Rockefeller Foundation. After spending a week in New Delhi and giving a few lectures there and meeting with officials of the Rockefeller and Ford Foundations, someone asked me "Would you like to see the children's hospital?" I was getting a little tired of seeing laboratories and hospitals and I said, "Not particularly. Is there anything of unusual interest at the children's hospital?" They said, "Well, it might interest you to know that it is completely run by Russians."

I said, "What do you mean, 'run by Russians'?" They said, "Well, 2 or 3 years ago we had considerable difficulty. We just did not have a staff to run this hospital. The Russians under their technical assistance program, offered to bring in a complete staff of doctors and nurses and run this hospital."

I do not know what that cost the Russians in terms of dollars or rubles but I am sure it is a very small amount. I think that is a very smart thing from a public relations viewpoint because you know very well that the mothers and fathers of children in New Delhi think very well of the Russians for running this hospital for them and staffing it for them.

I would like to be naive enough to suggest that sometimes when you gentlemen are debating the foreign aid program and the amount of money that whenever you decide the amount of money that is going to be used in the Federal aid program you say, "Well, now, let us decrease the amount for military assistance and economic assistance by 5 and 10 percent and put it in the technical assistance program." I am sure then that we will greatly improve our international public relations, if you would just knock off about 5 or 10 percent from the funds for military and economic assistance. Do not take them away but stick them over in the category of helping people to help themselves. That is the only way I can think of ever cutting down the foreign aid program, by helping people to help themselves in matters of health, agriculture, and education.

GRAVITY OF PROBLEM OF ATHEROSCLEROSIS

I will simply say in my closing remarks that I would like to put in the record that atherosclerosis is the greatest killer in this country through its manifestations in coronary artery disease and cerebral hemorrhage, and it is going to kill two-thirds of us in this room, two-thirds of the adult male population in this Capitol Building. It is a disease that we ought to try to do the best we can to conquer. We can conquer it because there are parts of this world with millions of people where the disease is very rare.

Senator THYE. What parts, for instance, Doctor?

Dr. STARE. This disease is rare in most every part of the world where people live what we would call a somewhat primitive life where their diet needs are very simple, where our big city is rare,

where physical activity is a little more prevalent than it is in this country.

Dr. White and I have appeared at a number of medical programs together and we always sort of make this recommendation, part jesting, but in seriousness too; that is, it would be so much better for all of us if you would make arrangements with some neighbors, some friend of yours, who lives about a mile away, and you keep your car in his garage, let him keep his car in your garage, so that in the morning you have got about a mile's walk before you get to your car and in the evening before you get home you have about a mile's walk to get home.

We are emphasizing the importance of exercise.

Another way that I have tried to emphasize it is this: I had a popular article in a magazine several years ago which was entitled "What This Country Needs Is a Five-Hole Golf Course." The point being that if each of us would take the time to play 3, 4, 5 holes of golf a day when we cannot play 9 or 18, it would be important to our health and welfare.

I think this increase of a little more than $14 million that this citizen's budget it requesting over the appropriation for the National Heart Institute is very modest and can be very well and intelligently spent.

Thank you.

Senator HILL. You have a copy of the article in McCall's?

Dr. STARE. I do not have it with me, but will supply it for the record.

(The information referred to follows:)

AN INTERVIEW WITH DR. FREDERICK J. STARE, DEPARTMENT OF NUTRITION, HARVARD SCHOOL OF PUBLIC HEALTH, BY ELIZABETH POPE

Dr. Stare, is it possible to prevent a heart attack by diet?

No, it's not. But is is possible under certain conditions for certain individuals to reduce substantially their chances of heart trouble. Conversely, if you've a predisposition to coronary-artery disease—because of heredity or overweight or high blood pressure or elevated blood cholesterol—you can quite literally eat yourself to death. Sound diet is excellent health insurance.

What kind of diet are you talking about? Are you advocating cutting out foods high in cholesterol and cholesterol-producing fats?

Not primarily. I'm advocating cutting down on everything, but not cutting out anything. What I have in mind is a well-blanced diet which will take weight off if you're too fat or keep you thin if you're not.

What about cholesterol and all the talk now going around about how it piles up inside blood vessels, causing hardening of the arteries and choking circulation?

A lot of people are making a mountain of opinion out of a molehill of knowledge when it comes to cholesterol. In the last few years science has learned a lot about it, but there's still much to learn. At this point we know simply that fatty deposits in the heart and blood vessels—in part the result of too much cholesterol in the blood—are one immediate cause of 9 out of 10 coronaries. But no one has yet discovered what made the blood get that way in the first place. That's the payoff question. Until we can answer it, there's no point in recommending drastic changes in our national diet.

What is cholesterol?

Like salt and sugar, it's a chemical compound—a white, waxy, crystalline substance that looks and feels like needle-shaped soap flakes. It's present in all foods which come from animals, but in greatest amounts in egg yolk, whole milk, butter, fat meats, and organ meats like sweetbreads, liver, heart, kidney. It's been called the Dr. Jekyll and Mr. Hyde of the human body because normally it

plays an essential role in nerve tissue and in the making of most sex hormones. It's only when there's too much of it in the blood that it becomes a killer.

What happens then?

Then you may develop arteriosclerosis—or, more accurately, atherosclerosis, which is the most deadly type of hardening of the arteries. Blood cholesterol tends to accumulate, like rust inside an iron pipe, in patches along the inside walls of heart and blood vessels.

As these cholesterol deposits get bigger, they form a series of roadblocks in the circulatory system, where at any time a blood clot or a sudden constriction of the vessel may shut off the blood supply to the heart. That's what happened to President Eisenhower. It's the most common form of heart attack.

What causes blood clots? Are they a side effect of atherosclerosis or is there something in the blood itself which makes it form a clot?

Both. Regardless of the composition of the blood, clots are more likely to form in a vessel narrowed by atherosclerosis. But at the same time some blood is more prone to clot than others. Unfortunately, we don't know yet what it is in the composition of the blood that makes the crucial difference. One theory is that it's too high a concentration of fats. This is supported by the fact that many heart attacks occur at night, 4 or 5 hours after a fat-rich dinner and at the very time in the digestive cycle when blood fats are at their peak. In line with this theory, it is argued that we all would be better off if we ate light suppers and had our big meal at breakfast or noon, so that we'd be up and active, with an increased circulation, when our blood is heavy with fat. However, many competent specialists still are not convinced of the basic premise—that fats favor clotting.

How do I know whether I have atherosclerosis?

You don't. And neither does your doctor, unless you've already had a heart attack. Even then he can't be sure how severe your condition is. The only positive way science knows to measure atherosclerosis is by autopsy.

Under the circumstances, the best your doctor can do is to follow his hunches and keep a close watch for trouble. Five important factors involved in atherosclerosis are heredity, overweight, high blood pressure, elevated blood cholesterol, excessive smoking. When a doctor finds all these conditions present in one individual, it's time to do something about it.

On the other hand, if someone is lucky enough to have both parents live to a vigorous old age and if he himself is of normal weight, blood pressure, and the rest, he can forget all about cholesterol, and atherosclerosis too. If I were his doctor I would advise him to keep on eating the way he always has.

Are you saying that even if fats are eliminated from the diet there may still be too much cholesterol in the blood?

Yes, especially if you're overweight. Regardless of what you eat, your body manufactures cholesterol. It seems to prefer fats as raw materials, but if these are eliminated from the diet it can utilize the excess fatty tissue you're carrying around on your frame. In a pinch—when neither body fat nor dietary fats are available—it can convert carbohydrates and proteins into cholesterol.

As I've said, there's a lot we don't know about atherosclerosis. So far we're not ready to say it's caused only by diet, much less point to any one food element as the troublemaker. That's why I say that for most of us it's more important to count calories than to worry about the fat content.

Why are fat people more subject to heart trouble than thin ones? Is it because the heart is strained by having more work to do, or does being fat cause atherosclerosis?

The "strain" of more work is seldom involved in causing atherosclerosis or a coronary. Atherosclerosis is caused not so much by being fat as by getting fat. Blood cholesterol tends to rise when a person is gaining weight. This is when fatty deposits may be built up. It's bad enough when this happens gradually over a period of years, but when it happens fast and often (as when you keep going off and on fad reducing diets), it may be worse. If you can't get your weight down and keep it down, it's better not to reduce at all.

Do most doctors do an electrocardiogram and blood cholesterol test as a routine part of physical examinations?

Few general practitioners do them routinely, but I wish they would—especially the blood cholesterol test. Cardiograms are of less value, in my opinion. Broadly speaking, they show only whether or not the heart has suffered damage in the

past and give no clue as to the future. It's perfectly possible, therefore, to have a normal cardiogram in the morning and a coronary at noon. Furthermore, they're relatively expensive, ranging from $10 to $25.

A blood cholesterol costs less—about $5—and requires nothing of the patient other than a fifth of a teaspoon of blood. Recently the test has been worked out with only one drop of blood. Although blood cholesterol fluctuates and although it's not a precise test, I think it's well worthwhile, particularly if done annually as part of a regular checkup and repeated if the results seem unusual. In trying to spot atherosclerosis—before it's done its damage, that is—we have to rely on a chain of circumstantial evidence. Elevated blood cholesterol is an important link in that chain. By itself it's of no great significance, but when it occurs in connection with a hereditary weakness, overweight, high blood pressure and too much smoking, it's time to take care of those things that can be taken care of, such as diet.

What kind of diet do you recommend? I gather from what you said earlier that there's not much point in trying to cut out fats.

There isn't, as far as the general and presumably healthy public is concerned, except to control weight. But now we're talking about individuals who have good reason to be concerned about their hearts. If you've already had a coronary, if you have high blood pressure, a family history of heart trouble, are overweight and smoke too much—in other words, if all the storm warnings are up—you can't afford to sit around and wait until science comes up with final answers. Your first step should be to get your weight down by cutting calories all along the line. But you would also do well to reduce substantially the fats you eat. Trim visible fat off meat whenever possible. Choose lean cuts. Eat smaller portions and eat more chicken and fish. Cut down on all fats and eggs. Drink skim milk Eat more cottage cheese and smaller portions of other kinds. In these ways you should be able to reduce your fat intake from roughly 45 percent of the calories you eat, as in the usual American diet, to about 25 percent. This kind of diet will bring your weight down and also lower your cholesterol count. As far as is known it won't cure atherosclerosis, but it may keep it from getting worse.

Aren't there any medicines or special food preparations that will cure it?

No. There are products on the market which claim to lower blood cholesterol, and while some of these may be helpful to an occasional patient, none of them, as far as I know, have much practical importance.

Experimentally, though, we may be making progress. At the Hospital of the Rockefeller Institute for Medical Research in New York, and elsewhere, patients who have had serious coronaries are being put on their feet by being fed special-formula diets prepared in the laboratory. They can, however, eat nothing else.

If you have high blood pressure, is there anything you can do to relieve it?

Yes. Low-sodium diets and weight reduction have long been important parts of the treatment of high blood pressure. Really dramatic strides have recently been made by the use of various drugs. The latest, and by far the most successful, is named "chlorothiazide" and was recently reported on by Dr. Robert W. Wilkins at the Evans Memorial Hospital in Boston.

What about exercise? Is it good or bad for the heart?

Excellent, if it's taken frequently and in moderate amounts. Exercise not only helps keep weight down but it keeps heart muscles toned up. Furthermore, a well-exercised heart is better able to develop substitute circulation in case it is partially incapacitated by a coronary. I'm not advocating violent exertion unless you're used to it. Nor am I talking about sporadic Sunday spurts with a set of dumbbells. Exercise to help your heart should be a part of your daily routine. Make yourself do more walking, more stair climbing (within reasonable limits), more gardening, more leaf raking—yes, and more snow shoveling. But don't be so rambunctious about what you do that you develop a harvest hand appetite.

How about smoking?

There's no question that excessive smoking, with or without filters, tends to constrict the small arteries and elevate blood pressure. Many studies indicate that coronary disease is more prevalent in smokers than nonsmokers. If you're a chain smoker—especially if your pressure is already high—you ought to cut down. But maybe you won't be able to unless you figure out why you have to smoke so much. Possibly you'll discover that you're living under too great tension, and that in itself is not good for you.

But does tension have any more direct connection with heart attacks?

Many doctors think it does, and cite as evidence the fact that there are only half as many deaths from atherosclerosis in the easygoing State of New Mexico as in high-pressure New York. I myself know of no direct relationship between heart disease and emotional strain. If there were, wouldn't coronaries be common among primitive peoples who live their entire lives in constant, superstitious fear? The African Bantus, for example, seldom have heart disease. Two years ago I spent some time in Africa trying to find out why. I learned then the fears and anxieties that beset them, while different from ours, are no less powerful. The undeniable difference I noted in their lives was in their food. They eat far less than we do. Their fats are of a different order and bulk far less in their diet. Their consumption of protein and starch and sugar is different. I'm not prepared to say which of these nutritional factors is responsible for their strong hearts, but I'll have to see the evidence before I'll believe that tension has much to do with the matter.

Is it true that men are twice as likely to have heart attacks as women?

I don't know that they're twice as likely to, but they're apt to have considerably more—especially during the prime of life. After the menopause there's very little difference in the rate.

The interesting thing is that the gap between men and women is narrowing. As you doubtless know, the coronary death rate for both sexes is rising, but women's faster than men's.

Why is that? Is it because we're eating more fats?

I don't know. As a matter of fact, there's no evidence that we are eating more fats, except insofar as we're eating more food of all kinds because more people are more prosperous.

There are at least three possible explanations for the coronary increase. First, a paradoxical one: Heart disease is up because life expectancy is longer—that is, because science has learned to cure so many once-fatal diseases that people are now living long enough to develop heart disease. Second: because we're doing a better job of diagnosing and recording heart fatalities. This could account for as much as 40 percent of the apparent rise. Third: because we—and especially women—are getting less exercise.

Perhaps that's why there is now more cause for women to start worrying about their hearts. A simple answer would be for women, especially after forty, to add exercise to their daily routine.

ARTICLE FOR ATLANTIC MONTHLY

Dr. Stare. I have an article which is to appear in the July or August issue of Atlantic Monthly which is a much more scholarly article but is still not written above the heads of anybody who has graduated from eighth grade. It is entitled "What Really Does Cause Heart Attacks?" It is based largely around these five points and tries to point out the additive effect. Just because you know a person who is 250 pounds does not necessarily mean that this overweight is going to cause him to have a heart attack or a stroke. But if this person who weighs 250 pounds has a strong hereditary history of cardiovascular disease in his family, if his blood pressure is elevated, if blood cholesterol is elevated, then the overweight is pretty bad.

If you have only 1 or 2 of these things you are lucky. If you have five, I feel sorry for you.

Senator Hill. Doctor, you have certainly made a most interesting witness and made a very fine, stimulating and challenging statement. We want to express to you our deep appreciation. If you have any further suggestion at any time I wish you would let us have it.

Dr. Stare. Thank you for letting me get my 1 o'clock plane.

Public Health Service Hospitals

(Senator Hill, on p. 1146, requested a memorandum from the Department of Health, Education, and Welfare as of May 20, 1958, giving an additional report on the status of the projects for major repairs and improvements of the Public Health Service hospitals. The following letter, with enclosures, was submitted in compliance therewith:)

The Secretary of Health, Education, and Welfare,
Washington, D. C., May 21, 1958.

Hon. Lister B. Hill,
Chairman, Subcommittee on Departments of Labor and Health, Education, and Welfare, and Related Agencies, Committee on Appropriations, United States Senate, Washington, D. C.

Dear Mr. Chairman: In accordance with your request made at the close of our appropriations hearings, this letter is intended to acquaint you with the developments which have subsequently occurred with respect to the process of reviewing and approving individual projects for major repairs and improvements of the Public Health Service hospitals.

As can be seen from the earlier correspondence on this matter which you included in the appropriations hearing record, there has been involved the question whether or not budgetary determinations with respect to major repairs and improvements should be affected by the exploration of the possible feasibility of carrying out the Hoover Commission recommendation in regard to the provision of medical care for merchant seamen. Pending the completion of such exploration, it has been concluded, as a result of discussions with the Bureau of the Budget, that plans for the operation, maintenance, and modernization of Public Health Service hospitals should be based on the assumption that the Federal Government will continue to be responsible for the same groups of patients, including merchant seamen, which its hospitals now serve. Further, it has been concluded that the review of the Public Health Service hospital system which is already underway should go forward as rapidly as possible with a view to developing a long-range plan, the aim of which will be an efficient hospital system capable of rendering first-class medical care.

Against this background, the Budget Bureau has issued a revised directive to the General Services Administration (copy attached) which has the effect of withdrawing their letter of April 16 and substituting a request that individual project data for major maintenance and improvements be submitted to the Budget Bureau for all Public Health Service hospitals prior to authorizing construction work. Discussions have also been held with the General Services Administration, and we have worked out a system whereby the General Services Administration and the Public Health Service will jointly submit justification of specific projects to the Budget Bureau. This system envisions a submission to the Budget Bureau at the earliest practicable date either before or during the design stage of the project in order that the Budget Bureau review might be made concurrently with the progress on design work and avoid any delays in the start of construction.

As was testified, there is currently approximately $5 million of projects which the Public Health Service and the General Services Administration have agreed are needed for these Public Health Service hospitals. A review of these projects with the Budget Bureau resulted in clearing projects costing $2.7 million so that they might proceed without any additional review. With respect to the remaining projects costing $2.3 million, specific justification for each of the projects is being developed for submission to the Budget Bureau. On only two of these projects has design work been completed. Justification for these two projects is being forwarded to the Budget Bureau today in order that we might minimize any delay in starting construction on these projects. Justification material on the remaining projects will be submitted as quickly as it can be developed.

There are attached lists of projects making up the $5 million, identifying those projects which have been authorized to proceed without further review.

I assure you that we will make every effort to proceed with dispatch with the necessary planning and construction work in order that these hospitals will oper-

ate effectively. I hope that this information will fully answer your inquiries on this subject and if there is any additional information that we can supply, please call on us.

Sincerely yours,

ELLIOT L. RICHARDSON,
Assistant Secretary.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D. C., May 20, 1958.

Mr. F. MORAN MCCONIHE,
Commissioner, Public Buildings Service,
General Services Administration, Washington, D. C.

DEAR MR. MCCONIHE: Reference is made to Mr. Eigenmann's letter of April 16, 1958, regarding contracts for alterations at Public Health Service hospitals.

To clarify the intent of our April 16 request, the Bureau of the Budget does not wish to review proposed maintenance work at Public Health Service hospitals, repairs which are necessary for continued operation of the hospitals or projects the need for which is related to the safety of the occupants of the buildings. The Bureau is interested only in reviewing proposed capital improvements (including air conditioning) and major alterations to or replacements of existing facilities. As a further guide in the disposition of projects which are not clearly in one of these categories, any project, the estimated cost of which exceeds $25,000, should be submitted for review.

In order to insure uniform application of this policy, it is requested that the hospitals at Lexington, Ky., Fort Worth, Tex., and Carville, La., be added to the previous list.

Will you kindly advise the Department of Health, Education, and Welfare of this clarification of the April 16 letter?

Sincerely yours,

SAM R. BROADBENT,
Chief, Commerce and Finance Division.

	A [1]	B [2]	Plans and specifications 100 percent complete	C [3]
1. Baltimore	$1,208,000	$155,000	$155,000	
2. Boston		83,000		
3. Carville	364,160	763,000		
4. Chicago	136,192	156,200		
5. Detroit	1,996	210,800		
6. Fort Worth	5,000			
7. Galveston		242,266	242,266	
8. Lexington	580,592			
9. Manhatten Beach	6,400			
10. Memphis	25,960	188,250		$63,000
11. New Orleans	34,500	205,000		
12. Norfolk	60,240	216,000		
13. San Francisco	70,205			
14. Savannah	56,660			69,800
15. Staten Island	164,749			
16. Seattle	23,900			
Total	2,738,554	2,219,516	397,266	132,800

[1] Work in progress or further review by BOB not required.
[2] Continue with design and/or drawings and specifications after which BOB desires to review prior to initiation of work.
[3] BOB desires to review prior to initiation of design work.

BALTIMORE

Modernization of elevators (plans and specifications 100 percent complete)	[1] $115,000
Combination passenger and freight elevator, building No. 2 (plans and specifications 100 percent complete)	[1] 40,000
Air conditioning (plans and specifications 100 percent complete)	[2] 1,200,000
Roof repairs (plans and specifications 100 percent complete)	[1] 8,000

BOSTON

Extension of garage, driveway and approach work, estimated cost (design 85 percent complete; scheduled for advertising 1st quarter 1959)	[1] 83,000

CARVILLE, LA.

Painting, ambulance entrance, gate house alterations, floor resurfacing, etc. (plans and specifications 75 percent complete)	[1] 90,000
Replacement of soft-water-heater tank (plans and specifications 5 percent complete)	[2] 7,000
Extensions, alterations, etc. (plans and specifications 60 percent complete)	[1] 430,000
Air conditioning recreational building and infirmary (plans and specifications 95 percent complete)	[1] 243,000
Work in progress	
New sewage-disposal plant (work 92 percent complete)	[2] 228,021
Exterior painting, miscellaneous improvements, etc. (work 86 percent complete)	[2] 129,139

CHICAGO

Architectural and engineering contract ($7,200) covering plans and specifications for the following work:	
Remodeling pharmacy, laboratory and nursing stations	26,000
Relocate patient library, canteen and barber shop and enlarge main storeroom	20,000
Resurface roadways and tennis courts, and provide additional parking facilities	30,000
Replace windows in old section	60,000
Modernize 2 bathrooms in building No. 10	4,000
Master key, old section of building	2,000
Install safety treads on stairways	4,200
Install new fire doors and panic hardware and repair fire escape	10,000
Total estimated cost (status of contract 70 percent completed)	[1] 156,200
Construction contracts:	
(a) Alterations in south wing, main building (completed except for correction of minor omissions and defects)	[2] 9,638
(b) Remodeling, exterior painting and miscellaneous repairs (completed except for correction of minor omissions and defects)	[2] 123,206
(c) Walk-in freezer (final settlement in process)	[2] 3,348

DETROIT

Architectural and engineering contract ($10,000) covering plans and specifications for the following work:	
Remodel 3 washroom units on AB wing	12,000
Remodeling of main kitchen	10,000
Conductive flooring for instrument room and hallway adjoining the operating rooms, building No. 1	2,000
Replace present tank in building No. 2 with porcelainized lined tank of 1,250-gallon capacity	2,700
Install metal acoustical ceiling in major and minor operating rooms	2,000

[1] Continue with design and/or drawings and specifications after which Bureau of the Budget desires to review prior to initiation of work.
[2] Further review of Bureau of the Budget not required.

DETROIT—continued

Architectural and engineering contract ($10,000) covering plans and specifications for the following work—Continued	
Install electric lift on north front of building No. 2	$3,000
Rebuild cement sidewalks, south facings of buildings No. 5, 6, and 7; also rebuild cement sidewalks between tennis court and buildings No. 8 and 9; replace stoops on buildings No. 6 and 7, and resurface drives on reservation	20,000
Convert building No. 4 (formerly nurses' home) to apartments	150,000
Replace side steps at building No. 5; replace urinals, all floors, C wing; install fire doors each floor level and enclose main stairwell, building No. 1	9,100
Total estimated cost (status of contract, 70 percent completed)	[1] 210,800
Construction contracts: Boiler repairs, etc., completed except for correction of minor omissions and defects	[2] 1,996

FORT WORTH, TEX.

Floor replacement in garment shop (plans and specifications 10 percent complete)	1,500
Steam-cleaning and sealing stone (plans and specification 10 percent complete)	[2] 3,500

GALVESTON, TEX.

Air conditioning, lighting, painting, etc. (Plans and specifications 100 percent complete)	[1] 242,266

LEXINGTON

Architectural and engineering contract ($14,000) covering plans and specifications for the following work:	
New refrigeration system for kitchen, butcher shop, and bakery; replace steam-return lines in EA and WA buildings; replace electric-service poles	70,000
Replace approximately 3,000 prison-type light fixtures with modern type	25,000
Replace 1-pipe heating system in EB and WB buildings with radiators, steam, steam-return lines	22,000
2d phase of tuck pointing and waterproofing all buildings	50,000
Alterations to WC building to provide space for proposed new admission unit	16,000
Additional exhaust system for main kitchen	8,000
Install conductive floor and ungrounded electrical system in operating room	5,000
Install quarry tile wainscot in main kitchen, diet kitchen, vegetable-preparation room, and dishwashing area	10,000
Install 2 fire escapes in Kolb Hall	15,000
Masonry repairs, main structure:	
1st phase, repair 25 shower stalls; 2d phase, replace plaster walls with ceramic tile, lard room, abattoir; repair and waterproof autopsy unit, morgue; plaster repairs, corridor Northwest control center to WT buildings	74,000
Repairs to ladders and lightning rods on chimney to boilerroom; install weatherstripping, officer's quarters; insulate attic, quarters P–19	2,000
Total estimated cost (status of contract 90 percent completed)	[2] 297,000

[1] Continue with design and/or drawings and specifications after which Bureau of the Budget desires to review prior to initiation of work.
[2] Further review of Bureau of the Budget not required.

LEXINGTON—continued

Construction contracts:	
(a) Install 100,000-gallon water tank, (cost) (status of contract, 96 percent completed)	[2] $62,881
(b) Exterior and interior painting, roof and parapet work (cost) (status of contract, 98 percent completed)	[2] 43,623
(c) Alterations and additions to nurses' home (cost), (status of contract, 99 percent completed)	[2] 152,588
(d) Boiler repairs (cost) (status of contract, 85 percent completed)	[2] 24,500

MANHATTAN BEACH

No work under construction.	
Drawings and specifications in preparation:	
1. New composition roofing, corridor partitions, door repairs (on market, bid opening dated May 12, 1958)	[2] 3,400
2. Installation of new exit-light fixtures (specifications completed)	[2] 3,000

MEMPHIS

(a) Projects on market for bids: Painting, asphalt tile, and miscellaneous repairs; bids opened May 2; low bid	[2] 25,960
(b) Projects now under design by Architectural and engineering contract:	
(1) Air conditioning surgical building (design, 15 percent complete; estimated design cost, $5,270; estimated construction cost, $88,000), total estimated cost	[1] 93,270
(2) Air conditioning of main building (design, 15 percent complete; estimated design cost, $3,900; estimated construction cost, $65,000), total estimated cost	[1] 68,900
(3) Air conditioning of officers and attendants quarters (design, 15 percent complete; estimated design cost, $1,480; estimated construction cost, $24,600) total estimated cost	[1] 26,080
(c) Projects scheduled: Modernization of electrical system (design scheduled for 4th quarter fiscal year 1958; estimated design cost, $5,000; construction contract scheduled for award 1st quarter fiscal year 1959; estimated cost, $58,000) total estimated cost	[3] 63,000

NEW ORLEANS, LA.

Modernization of electrical service (plans and specifications 75 percent complete)	[1] 100,000
Alterations to outpatient clinic (plans and specifications 80 percent complete)	[1] 80,000
Install all-purpose incinerator in boilerroom (plans and specifications 100 percent complete)	[2] 30,000
Alterations, etc. to buildings Nos. 12 and 17 (plans and specifications 70 percent complete)	[1] 25,000
Casement windows for unexcavated spaces (plans and specifications 100 percent complete)	[2] 3,000
Chimney repairs (plans and specifications 100 percent complete)	[2] 1,500

NORFOLK, VA.

Renovation of EENT (plans and specifications 70 percent completed)	[2] 11,700
Replace elevators (plans and specifications 35 percent completed)	[1] 216,000
Fire-alarm system (plans and specifications 0 percent completed)	[2] 25,000
Replace tile floors (plans and specifications 45 percent completed)	[2] 4,000
Work in progress: Replace tile floors, building A (work 12 percent completed)	[2] 19,540

[1] Continue with design and/or drawings and specifications after which Bureau of the Budget desires to review prior to initiation of work.
[2] Further review of Bureau of the Budget not required.
[3] Bureau of the Budget desires review prior to initiation of design work.

SAN FRANCISCO

Roof repair (99 percent complete)	[2] $1,847
Resurface roadways (25 percent complete)	[2] 9,800
Dry standpipe (work to start this week)	[2] 2,483
Motor generator (contractor has acquired equipment and it is in his shop for assembly; equipment cost is 70 percent of this job)	[2] 47,975
Install 14 garbage-disposal units (drawings and specifications 80 percent complete)	[2] 8,100
Relocation 1 nurses' station (drawings 10 percent complete)	([2])

SAVANNAH, GA.

(*a*) Projects under construction: Replacement of electrical service entrance (project awarded 1st quarter fiscal year 1958; project 90 percent complete), total cost	[2] 50,260
(*b*) Projects on market for bids: Additional electrical work (bids were to be opened June 17 for award 1st quarter fiscal year 1959), estimated project cost	6,400
(*c*) Projects scheduled:	
(1) Replace steam generator (project scheduled for fiscal year 1959; design in 1st quarter; construction in 2d quarter; estimated design cost, $900; estimated construction cost, $15,900) total estimated cost	[3] 16,800
(2) New elevator (project scheduled for fiscal year 1959; design in 1st quarter; construction in 2d quarter; estimated design cost, $3,000; estimated construction cost, $50,000) total estimated cost	[3] 53,000

STATEN ISLAND

Work under construction:	
1. Removal and replacement of metal window frames, sash and screens, building No. 1 (awarded Oct. 14, 1957; material being fabricated; no progress at site)	[2] 24,484
2. New cooling tower (awarded Jan. 15, 1958; fabrication of material started Apr. 10, 1958; no progress at site)	[2] 4,560
3. Addition to medical officer's quarters and modification of kitchen (awarded Apr. 10, 1958; work commenced Apr. 26, 1958; excavation completed)	[2] 11,980
4. Resurfacing parking area (awarded Feb. 27, 1958; work delayed until warmer weather; construction to start at site May 15, 1958)	[2] 6,125
Drawings and specifications in preparation:	
1. Replacement of outside roof doors, and construction of protective awnings over new doors (field inspection made; specifications not started)	[2] 11,400
2. Replacement of steam traps and vacuum pumps (specifications 50-percent completed)	[2] 8,600
3. Replacement of linoleum with tile (specifications 90-percent completed)	[2] 13,000
4. Cleaning and pointing of 3 entrances to mail building and 1 entrance to building No. 7 (specifications 90-percent completed)	[2] 6,000
5. Replacement of soundproofing in selected areas (specifications and drawings 90-percent completed)	[2] 17,000
6. Regrading and black topping of roadways and parking areas (specifications and drawings 90-percent completed)	[2] 30,500
7. Painting of boundary fence (field inspection made; specifications not started)	[2] 3,600
8. New acoustical ceiling (cafeteria) (bids opened; awaiting award)	[2] 13,000
9. Convert dining room to dishwashing room (specifications completed and ready for advertising)	[2] 14,500

[2] Further review of Bureau of the Budget not required.
[3] Bureau of the Budget desires review prior to initiation of design work.

SEATTLE

Partition alterations for neuropsychiatric strongrooms on 3d floor	[2] $9,000
Provide new filtered ventilation in microbiology laboratory in room No. 40	[2] 2,000
Remove island and gasoline pump and pave driveway	[2] 2,000
Install new acoustic tile in 28 rooms	[2] 3,200
Install new wainscot in basement, ground floor, corridors, and laundry corridor of the main building	[2] 2,000
Paint stairwells throughout hospital main building	[2] 5,700
Total	23,900

[2] Further review of Bureau of the Budget not required.

LETTER FROM SENATOR NEUBERGER

Senator HILL. Senator Neuberger has written to me urging the committee to give consideration to the adult education program of the Office of Education. The Senator's letter, with enclosures, will be made a part of the record at this point.

(The letter referred to follows:)

UNITED STATES SENATE,
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
April 29, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Labor and Health, Education and Welfare, Committee on Appropriations,
United States Senate, Washington, D. C.

DEAR SENATOR HILL: I am writing you in connection with the appropriation bill for the Department of Health, Education, and Welfare which is now before your subcommittee. I would like to submit for your consideration the suggestion that provision be made in this budget for an increase in the personnel and activities of the Office of Education in the field of adult education.

At a meeting on November 18, 1957, the Delegate Assembly of the Adult Education Association of the United States of America adopted a resolution to the President of the United States, calling for such expansion of the adult education functions of the Office of Education, and also for the creation of a National Commission on Adult Education, as recommended in the second report of the President's Committee on Education Beyond the High School. I enclose a copy of this resolution, and of the letter of transmittal to the President, in the hope that it may be printed in the hearings of your subcommittee on this appropriation bill.

Evidently, the President has not acted on this recommendation, and the additional funds requested have not been included in the budget requests of the Department of Health, Education, and Welfare. However, I hope that in considering this budget, your subcommittee will give independent consideration to the adequacy of the Department's activities in this field of adult education, which can obviously play such an important role in developing and maintaining greater skills and knowledge among our people, after the end of their school years, to meet the rapidly changing conditions of modern times.

Sincerely,

RICHARD L. NEUBERGER,
United States Senator.

ADULT EDUCATION ASSOCIATION OF THE U. S. A.,
Chicago, Ill., December 6, 1957.

THE PRESIDENT OF THE UNITED STATES,
The White House,
Washington, D. C.

DEAR MR. PRESIDENT: I am transmitting to you a resolution which was adopted unanimously by the delegate assembly of the Adult Education Association of the U. S. A., representing some 10,000 adult education leaders throughout the country.

In essence, this resolution respectfully urges you to implement the recommendation of your Committee on Education Beyond the High School for the establishment of "whatever machinery may be necessary (*a*) to further a continuous and orderly review and development of the national and intragovernmental aspects of education beyond the high school, and (*b*) to fulfill the other needs relating thereto which are identified in these conclusions and recommendations." To accomplish this purpose, our association urges you to create a National Commission on Adult Education and to ask Congress to appropriate funds to maintain such a commission.

We realize that these are times in which only the most urgent matters of national welfare can and should command your attention. We believe that adult education has so much to contribute to the solution of urgent national problems that it is in the national interest to implement these recommendations immediately.

Very sincerely,

(Mrs.) Grace T. Stevenson,
President.

Resolution to the President of the United States

Adopted by the Delegate Assembly of the Adult Education Association of the United States of America, San Diego, Calif., November 18, 1957

Whereas the President's Committee on Education Beyond the High School has recognized that its study of adult education is largely unfinished; and

Whereas the President's committee was greatly handicapped by the dearth of up-to-date information regarding the scope and nature of adult education; and

Whereas the demands of both our social order and our adult population for continuing education throughout life is causing a rapid expansion of this field; and

Whereas this expansion is often taking place without adequate planning and research: Be it

Resolved, That the Adult Education Association of the United States of America respectfully urge the President of the United States to establish a National Commission on Adult Education to study the field as recommended in the Second Report of the President's Committee on Education Beyond the High School and that he ask Congress to appropriate funds to maintain the Commission and make studies as may be deemed necessary; and be it

Resolved further, That the Secretary of Health, Education, and Welfare, be urged to provide in the budget of the Office of Education for a material increase in personnel, facilities, and funds to serve the field of adult education as outlined in the second report of the President's committee.

National Education Association

Senator Hill. The National Education Association has also addressed a letter to me stating the view of the association with respect to programs of the Office of Education, with particular reference to vocational education and library services. This letter will become a part of the record at this point.

(The letter referred to follows:)

National Education Association,
Washington, D. C., May 7, 1958.

Hon. Lister Hill,
Chairman, Labor, Health, Education, and Welfare Subcommittee, Committee on Appropriations, United States Senate, Washington, D. C.

My Dear Mr. Chairman: I should appreciate it if this letter stating the views of the National Education Association on appropriations for the Office of Education and its programs could be included in the record of hearings on H. R. 11645, the Labor-Health, Education, and Welfare appropriation bill for 1959.

The 1957 representative assembly of the National Education Association, meeting in Philadelphia, adopted the following resolutions with respect to the United States Office of Education and with respect to the programs of Federal assistance for vocational education and rural library services:

"*Resolution 9. United States Office of Education.*—The National Education Association reaffirms its belief that education will best be served at the national level by an independent United States Office of Education under a national board of education. It believes that legislation to create an independent United States Office of Education should be enacted in order to provide appropriate, nonpartisan, Federal leadership in meeting educational problems of nationwide concern.

"The association considers it imperative, under any circumstances, that the Federal Government establish conditions and provide funds adequate to employ educational leadership of the highest professional competence. The association urges that the United States Commissioner of Education be appointed for a definite term of office.

"The association further emphasizes the importance of research and the collection and distribution of information about the conduct of education to be carried on by the Office of Education in cooperation with institutions and organizations. It urges increased appropriations for survey, research, and the dissemination of information."

"*Resolution 8-E. Vocational education.*—The association urges the Congress to continue to appropriate funds for vocational education in the full amount authorized by existing legislation and to examine with great care any proposed legislation to modify the present program.

"*Resolution 24. Rural library service.*—The National Education Association believes that a strong public library system is a vitally necessary adjunct to the operation of public schools. The association believes that farm and other rural families should have the same access as urban dwellers to books, newspapers, magazines, audiovisual materials, and other sources of information which well-developed city library systems now provide.

"The association commends the Congress for its recently enacted legislation providing grants-in-aid to the States for the development of rural library services. It urges the appropriation of funds in amounts necessary to carry out the objectives of the program in the manner intended by Congress."

On December 20, 1957, the NEA legislative commission announced a legislative program for consideration by the 2d session of the 85th Congress. With regard to established Federal education programs this statement said:

"The commission recognizes the need for Federal assistance for such well-established and clearly useful programs as vocational education, library services, school lunches, and aid to federally affected areas. No consideration should be given to reduction or termination of these programs until it can be demonstrated that the need can be met from other resources."

The subcommittee of which you are chairman has before it H. R. 11645 containing an appropriation of $7,800,000 for the salaries and expenses of the Office of Education. This is a reduction of $150,000 from the budget request. It is our understanding that $50,000 of this reduction was made as part of a blanket disallowance of funds for civil-defense activities. The request for a $900,000 increase over appropriations for the current fiscal year was a modest one and would permit the continued orderly growth of the Office's services to other agencies of the Federal Government, including Congress, to education, and to the general public. We respectfully call your subcommittee's attention to the fact that the current interest in science, mathematics, foreign languages, and international education is creating a greater demand for the services of the Office of Education than it has ever experienced. We believe that this demand is a healthy one, since the public should receive from the Office of Education services and information comparable in scope and quality to what is furnished to farmers and businessmen by the Departments of Agriculture and Commerce, to give but two examples. We hope that your subcommittee will restore the $100,000 cut from the request for the Office's established functions and that the subcommittee will encourage the Office to request, when necessary, the funds to expand its services.

We are glad to note that the House has allowed the full amount of $33,750,000 requested for vocational education programs authorized by the George-Barden Act. This will permit the States taking part in the vocational program to continue the training of thousands of young people for occupations which are not only useful, but in many cases essential.

As passed by the House, H. R. 11645 appropriates $5 million for grants to the States for library services, an increase of $2 million over the amount requested in the budget. We note with regret, however, that this appropriation is still $2,500,000 less than the amount authorized by the Library Services Act of 1956.

Only recently, the Office of Education published State Plans Under the Library Services Act, a summary of the State programs outlined for fiscal year 1957. In view of the fact that funds were available for only 6 months of that fiscal year, the States participating in the Library Services Act seem to have attacked their rural library problems with amazing vigor. No doubt, an even more impressive record of accomplishment will be revealed when the reports for subsequent fiscal years become available.

Nevertheless, the fact remains that unless there is an increase in the appropriation for library services, the program will operate for 2½ of the 5 fiscal years for which it is authorized without making available to the States the full amount of assistance intended by Congress when it passed the Library Services Act. With more than 2 million of our youth attending high schools in which 300 or fewer students are enrolled, a well-developed rural library service is indeed essential if these young people are to have access to books and visual aids to supplement the limited resources of a small high school. Hence, the NEA urges your subcommittee to increase the appropriation for rural library services from the $5 million appropriated by the House to the full amount of $7,500,000 authorized by the Library Services Act of 1956.

Respectfully yours,

WILLIAM G. CARR,
Executive Secretary.

LETTER FROM SENATORS MURRAY AND MANSFIELD

Senator HILL. Senators James Murray and Mike Mansfield have addressed a joint letter to me urging the appropriation of the full amount of the authorization of $7.5 million for the rural library services, and detailing some of the fine accomplishments of this program in the State of Montana. This letter will be inserted at this point in the record.

(The letter referred to follows:)

UNITED STATES SENATE,
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
May 19, 1958.

Hon. LISTER HILL,
Chairman, Senate Appropriations Subcommittee on Labor, Health, Education, and Welfare, Capitol, Washington, D. C.

DEAR MR. CHAIRMAN: May we say at the outset that the people of Montana are tremendously grateful to you and your colleagues on the Appropriations Committee for your understanding and appreciation of the Rural Library Services Act. We hope that some day soon you all may come to Montana to hear from their own lips the appreciation of the children and rural families who now have access to good reading, and the thanks of librarians and teachers.

During the first 10 months of operation of this act in Montana, from April 1, 1957, to February 1, 1958, bookmobiles traveled 19,000 miles and circulated more than 40,000 books.

More than 18,000 new books, purchased with Federal money and existing library budgets, were processed and cataloged. About 32,000 books in existing collections were cataloged. Out-dated books were weeded out. Consultant service in small libraries has been provided and there have been workshops on book selection.

We have received but one complaint regarding this act. It comes from those who want their children to have library service too, but cannot as yet receive it because of the extremely limited operating funds of the Montana State Library Extension Commission.

The administration recommended only $3 million for this program. The House increased the amount to $5 million. It has been proved to our satisfaction that the authorized appropriation of $7.5 million (of which $72,427 would be Montana's share) for this program is fully justified. Certainly Montana's share will be put to good use. The State library extension commission has an excellent program that can be expanded to reach some of the thousands who still are denied the wonderful services which libraries can provide.

Representative Lee Metcalf and Representative LeRoy Anderson join us in urging you and your colleagues to recommend an appropriation of $7.5 million for the library services program.

We would like to have the enclosed Montana Progress Report Under the Library Services Act, February 1, 1958 made part of our statement.

Sincerely yours,

JAMES E. MURRAY,
United States Senator.
MIKE MANSFIELD,
United States Senator.

MONTANA PROGRESS REPORT UNDER THE LIBRARY SERVICES ACT, FEBRUARY 1, 1958

On April 1, 1957, Montana's plan got underway when the first payment of $40,000 was received. Two federations of libraries were in existence, ready to participate in the first two demonstrations under Montana's plan.

The Northwest Montana Federation includes Lincoln and Flathead Counties, with Mrs. Robert Herrig, of Libby, as coordinator. Here cooperation had started as early as November 1956—long before the funds were available. Cooperative book buying and centralized technical processing were set up by Mrs. Herrig, and the four relatively strong existing libraries shared service in every possible way.

The Five Valleys Federation includes seven counties: Missoula, Sanders, Lake Mineral, Ravalli, Granite, and Powell. This federation has an entirely different situation with only 1 strong central library and 6 small units participating.

Immense progress in better library service is evident in western Montana since April 1, 1957:

Over 18,000 new books have been centrally processed and cataloged. These books were purchased with both Federal money and existing library budgets, and are in brisk circulation. They include a good basic collection of reference material for every library.

Approximately 32,000 books in the existing collections have been newly cataloged. An intensive job of weeding was done in all of the libraries to rid the shelves of old, outdated, and badly worn books prior to the job of cataloging.

New and attractive library furniture, shelving, lights, equipment, typewriters, steel files, etc., and a variety of audiovisual equipment have been provided for all of the libraries in both federations.

Two bookmobiles have been purchased and are in daily use. Title to the bookmobiles remains with SLEC, but each federation will keep the bookmobile assigned for its use as long as the cooperative arrangement continues. The 2 units have traveled nearly 19,000 miles and have circulated over 40,000 books.

Workshops have been held on book selection, use of the new reference books, and a variety of library problems. The workshops have been very well attended and have proven to be of immense value in pointing the way to improved library services.

Regular meetings for shared book selection are held. The participating librarians have expressed a great deal of enthusiasm for these meetings, which make it possible for the librarians to avoid expensive duplication of costly reference books, and to eliminate duplication of a great many titles which have only limited appeal. Too, there is an opportunity for the sharing of opinions on the possible value of various titles which are currently popular. The chief advantage of the book-selection meetings is the reminder to the librarian of her responsibility for a good selection: a vastly improved quality as well as quantity.

Consultant service in small libraries has been provided. The field consultants have helped with much practical advice, especially in the small understaffed libraries, and have pointed the ways to improved routines and better service.

One of the primary purposes of the Library Services Act is to strengthen the State agency. Here we have moved from cramped, uninviting quarters to a large and spacious building at South Avenue and Middlesex in Missoula. Efficiency has increased to a marked degree; service has been broadened in every possible respect. New desks and new equipment to facilities services have been added. The Commission has taken on the centralized technical processing for the Five Valleys Federation, a service which can well be enlarged to include the new federations. A statewide film circuit will be inaugurated with Great Falls as the center, with films and clerical help provided by the Federal funds. A photocopy machine has been placed in the Missoula Public Library to serve the State with copies of any article in the huge collection of periodicals available at that library.

Trips to all parts of the State for advice and consultation have been made by the staff, and a great deal of preliminary work has been done in the new areas to be developed.

Thousands of bulletins and newsletters have been mailed to the libraries and to the lay people to inform them of the possibilities of future development under the Library Services Act and to report progress. Circulation of our quarterly publication, Montana Libraries, has been broadened from 350 to 1,200; a handbook for trustees and a publicity primer for librarians are in the process of compilation.

It is evident from the above report that the program is an expanding one, and one which has been planned with the hope and assurance of the full appropriation from Congress. Failure to receive this help would curtail service in every corner of the State and might well wreck the program.

AMERICAN ASSOCIATION OF UNIVERSITY WOMEN

Senator HILL. The American Association of University Women has written to Senator Hayden, chairman of this committee, urging the support of the committee for the various programs of the Department of Health, Education, and Welfare. That letter will be included at this point in the record.

(The letter referred to follows:)

AMERICAN ASSOCIATION OF UNIVERSITY WOMEN,
Washington, D. C., May 14, 1958.

Senator CARL HAYDEN,
Senate Appropriations Committee,
United States Senate, Washington, D. C.

DEAR SENATOR HAYDEN: The American Association of University Women has a membership of over 143,000 women college graduates and is organized into 1,495 branches located in all 48 States, Alaska, Hawaii, Guam, and the District of Columbia. Since its founding 76 years ago, and in accordance with its charter, the purpose of the association has been the uniting of alumnae of institutions of higher education for practical educational work, for the collection and publication of statistical and other information concerning education, and in general for the maintenance of high standards of education.

During this year of extraordinary pressures upon the Federal budget it has been a matter of very serious concern in the association that imbalances in appropriations may result.

We are sure that your committee will take into consideration in making appropriations for the several agencies which make up the Department of Health, Education, and Welfare not only these extraordinary problems, which are creating heavy new demands upon the agencies of the Department, but also the steady increase of United States population which necessitates an ever-expanding program in the Department of Health, Education, and Welfare. It is our earnest desire to communicate the support of AAUW for your committee in its work of making adequate appropriations to continue effectively the program of the Department.

Particularly we wish to recommend that this committee appropriate the full $5 million authorized for the implementation of the Library Services Act of 1956, that the Office of Education receive the full sum listed in the departmental budget resquest and that the full appropriations requested be granted for the several welfare programs of the Department.

We again wish to reiterate our support for such action as measures insuring the well-being and security of the Nation.

As Dr. Anna L. Rose Hawkes, president of AAUW, at the direction of the board, wrote to the President of the United States in December of last year, "This present crisis must not be allowed to overbalance the development of material resources at the expense of human resources."

May we request that you bring this letter to the attention of the other members of the Senate Appropriations Committee.

Sincerely yours,

Dr. JANET MACDONALD,
Chairman, Social and Economic Issues Committee.
MRS. KATHERINE BAIN,
Chairman, Legislative Program Committee.
DR. KATE HEVNER MUELLER,
Chairman, Education Committee.

LETTER FROM SENATOR GREEN

Senator HILL. Senator Green, of Rhode Island, has written to the chairman of this committee, transmitting a letter addressed to Senator Green from Dr. Grace M. Sherwood, librarian of the Rhode Island State Library, urging this committee to approve the full amount of the authorization, $7.5 million, for the rural library services program. These letters will be included at this point in the record.

(The letters referred to follow:)

UNITED STATES SENATE,
COMMITTEE ON FOREIGN RELATIONS,
May 16, 1958.

Hon. CARL HAYDEN,
Chairman, Committee on Appropriations,
United States Senate, Washington, D. C.

DEAR MR. CHAIRMAN: Enclosed for the information of your committee in its deliberations on H. R. 11645, the fiscal 1959 appropriations bill for the Departments of Labor, Health, Education, and Welfare, is a copy of a letter dated May 12.

This letter, and the accompanying report, forwarded to me by Dr. Grace M. Sherwood, librarian of the Rhode Island State Library, will, I know, be of interest to you.

I certainly hope that adequate appropriations will be included in H. R. 11645 for the operation of the Library Services Act program in the various States during fiscal year 1959.

Yours sincerely,

THEODORE FRANCIS GREEN.

RHODE ISLAND STATE LIBRARY,
State House, Providence, R. I., May 12, 1958.

Hon. THEODORE FRANCIS GREEN,
Senate Office Building,
Washington, D. C.

DEAR SENATOR GREEN: In the endeavor to have the subcommittee be fully aware of the Rhode Island State plan under the Library Services Act program, with the hope that we may have full authorization of $7,500,000 for the fiscal 1959, we have been asked by the Washington office of the American Library Association to get in touch with our Senators and Congressmen, giving each the most recent report of the situation in Rhode Island.

We are, therefore, enclosing a copy of the report made by Miss Elizabeth Gallup Myer, the supervisor of the Rhode Island project, and published in the spring bulletin of the Rhode Island Library Association.

Miss Myer is exceedingly competent and the rural libraries concerned (there are 41 of these) have been eager to take advantage of these added services made possible through the generosity of the Federal Government and matching State funds.

Most cordially,

GRACE M. SHERWOOD, *State Librarian.*

PUBLIC LIBRARY SERVICES IN RURAL AREAS IN RHODE ISLAND

Public library services in rural areas got underway in January, operating from the State library until headquarters were readied on March 3 for occupancy at 30 Benefit Street. An office secretary and the bookmobile driver were assigned in February, and a typist was added in late March, all of whom are busily engaged with the tremendous amount of work involved in setting up a new unit, keeping records, and in handling book orders.

Headquarters had to be physically prepared for its function. Asphalt tiling was laid; ceiling, walls, and woodwork were painted; shelving was built; the driveway entrance was widened to accommodate the bookmobile; a sign of identification was mounted on the exterior; a telephone and a wall clock were installed; and electrical work for necessary receptacles was accomplished. Office equipment that was ordered included typewriters, desks, tables, chairs, vertical files, desk lights, a mimeograph machine, an adding machine, a book truck, card

cabinets, and miscellaneous items. Office and library supplies needed for processing books were purchased. Routines were established, such as mail delivery via the State house and regular cleaning for the rented building.

Book ordering began immediately. A mimeographed letter went out to libraries included in the program, inviting librarians to visit headquarters after March 31 in order to examine books and to express needs of the libraries. Telephone calls immediately began coming into headquarters, and librarians from four libraries did not wait for the April 1 date. Twenty-eight out of the eligible 41 are already engaged in ordering, and correspondence with outlying libraries is heavy. Visits from many libraries are now scheduled.

Selection of books for these libraries is based on needs expressed by their librarians and on obvious needs for standard titles in all age groups, nonfiction and fiction. Sample sets of leading encyclopedias are on display, and orders may be placed at a considerable saving.

Basic tools for a librarian may be examined and consulted here, and may be ordered. These include bibliographies, book-selection aids, publishing guides, cataloging tools, and manuals. Standard titles as well as current ones in subject fields, and standard and current titles of fiction, for all ages, are being selected. An effort is made to choose books of value, whether books of fact or books of fiction, which will stimulate adult and young readers. Reliable lists have been followed.

The requisition for a bookmobile to serve rural areas of Rhode Island that are now without public library service was placed in February. The bookmobile will be custom built, and will have a capacity of 2,000 books, supplied by a special book pool housed at headquarters.

The supervisor will begin field visits after July 1, offering help where requested. It is hoped that local libraries will stimulate their readers through the additions of new books, through wise withdrawal of obsolete material. and by extending their hours of service. Every effort will be made by the new public library services in rural areas, under jurisdiction of the secretary of state and in collaboration with the State library and the Rhode Island Library Association, to strengthen the resources and operation of rural libraries in this State. By working together, librarians in Rhode Island have a real opportunity to improve their services to readers and potential readers in Rhode Island.

Letter From Senator Neuberger

Senator Hill. I have here a letter from Senator Neuberger urging this committee to give favorable consideration to providing increased funds for dental research and training and for nurses training. The Senator's letter will be inserted at this point in the record.

(The letter referred to follows:)

United States Senate,
Committee on Interior and Insular Affairs,
May 17, 1958.

Hon. Lister Hill,
Chairman, Health, Education, and Welfare, Appropriations Subcommittee, United States Senate, Washington, D. C.

Dear Lister: As you well know from our past correspondence, I am vitally concerned that adequate appropriations be made for the many programs of the Department of Health, Education, and Welfare which are so necessary for the welfare of our citizenry. I have recently received a letter from Dean Harold Noyes of the University of Oregon Dental School and a copy of a letter addressed to you by Mrs. Evelyn H. Conner, chairman of the Oregon Nurses Association, concerning two such programs whose futures are threatened by a lack of funds.

Dean Noyes tells of application for training and research grants in dentistry which, if approved, could not be activated unless a greater appropriation for training purposes were made to the Public Health Service. The lack of trained individuals in this field would certainly seem to justify an increase in the appropriation for training purposes. I hope that your committee will give this every consideration.

Just as we are unable to utilize the many advances made in the field of dentistry because of limited training funds, so have our nursing programs gone without trained personnel because of the need for additional funds for the nurse traineeship programs. Mrs. Conner aptly described the situation in my State of

Oregon where, since the beginning of the program for the graduate training of nurses, they have had more than twice as many qualified applicants as available grants. This shortage of grants for the training of nursing teachers and supervisors will affect both the quality and quantity of future nurses.

Because of your recognition and outstanding leadership in our struggle for better health standards, I know that you will give these requests your full consideration.

With best wishes, I am

Sincerely,

RICHARD L. NEUBERGER,
United States Senator.

LETTERS FROM STATE NURSING ASSOCIATIONS

Senator HILL. Some 25 letters, representing a like number of States, have been previously received from State nursing associations and have become a part of the record of these proceedings. We now have 4 more letters from State nurses associations, as well as one from the Isthmian Nurses Association of the Canal Zone. These letters all support requests for additional funds for titles I and II of Public Law 911, for training public health personnel and graduate nurses training. These letters, too, will become a part of the record at this point.

(The letters referred to follow:)

KENTUCKY STATE ASSOCIATION OF REGISTERED NURSES,
Louisville, Ky., May 16, 1958.

Hon. LISTER HILL,
United States Senate, Washington, D. C.

DEAR SENATOR HILL: I am writing you in behalf of H. R. bill 11645, urging that you give full consideration for an increase in appropriations for titles I and II of Public Law 911.

In our State of Kentucky, with our many health problems, we have a grave need for more adequately prepared nursing personnel, especially in the areas of hospital administration, training schools, and public health. The number of hospitals in our State is increasing due to the available Hill-Burton funds, but many of our smaller hospitals have only the service of practical nurses. The public health programs in the State are expanding to include more services to the aged and chronically ill, the mentally ill, and the mentally retarded, and such programs call for ably trained public health nurses. The number of nurses in this important field who have had additional preparation beyond their basic nursing education is very limited as we have no local graduate schools, no State scholarships, and salaries have been such that nurses have not been able to save for further education.

Since the preservation of our Nation's health is of such vital importance in helping our country maintain its present high standards, and is such a safeguard against outside aggressive measures, I feel that you as chairman of your important committee would be rendering a real service in considering this request.

Respectfully yours,

Mrs. LOLA BELLE AKIN, R. N., *President.*

PENNSYLVANIA NURSES ASSOCIATION,
Harrisburg, Pa., May 16, 1958.

Hon. LISTER HILL,
United States Senate, Washington, D. C.

MY DEAR SENATOR HILL: The Pennsylvania Nurses Association representing over 18,000 members in all fields of nursing, would like to take this opportunity to present its view on certain items relating to the field of nursing which appear in the appropriations in H. R. 11645. We would particularly like to comment on the provisions for graduate nurse and public health traineeships and for nursing research.

It is the belief of this organization that general education has responsibilities for helping equip this large group of health professions to render its unique service to society.

In Pennsylvania in 1957, only 3 percent of nurses enrolled in schools of nursing are enrolled in degree programs. On the estimated needs for leadership positions, 33 percent or more of nurses now entering the profession should be prepared in degree programs.

The demand for nursing service has been increasing at a rapid rate and from all indications the demand for these services will continue to increase. Now and in the years ahead there will be an obvious need to meet the nursing needs of our growing population, additional hospital facilities and advances in medical practice. This association has long urged that Congress act on measures to increase the numbers of professional nurses concurrently with congressional action which leads to an expansion of hospital and other health services.

National and Pennsylvania surveys have shown that one of the most critical shortages of professional nursing appears in the field of prepared nurse educators. Pennsylvania prepares 11 percent of all nurses in the United States which indicates a significant responsibility in providing sound educational programs. That good teachers are essential to a sound educational program is obvious. In Pennsylvania where 93.6 percent of high school teachers have baccalaureate or higher degrees, only 56.7 percent of teachers in schools of nursing have baccalaureate or higher degrees—yet teachers in schools of nursing are teaching students beyond the high school level. The other 43.3 percent of nurses teaching have been prepared in diploma programs which do not include and are not intended to include principles and methods of teaching on the broad educational base which develops standards of scholarship and leadership expected in a teacher.

A survey of nursing needs and resources recently completed in Pennsylvania indicates that a high percentage of nursing personnel in all categories desire to improve performance in their present work or to qualify for specialization through further study. The number of scholarships awarded to Pennsylvania nurses meets only a fraction of a need. Only one-third of the public health staff nurses in this State have completed courses in public health nursing. Over half who desire further education have indicated that considerable assistance is needed.

From all indications the compelling need for highly skilled professional nursing personnel cannot be met unless substantial financial aid for graduate nurse students is forthcoming.

The Pennsylvania Nurses Association is deeply concerned to learn that the House of Representatives did not increase the appropriations for these programs in the face of the critical needs for health personnel, and urges favorable consideration by your committee to support the request for increased appropriations for those Federal Government programs which are so vital to the health and welfare of our people.

Very sincerely yours,

CLIFFORD H. JORDAN, R. N.,
Secretary, Pennsylvania Nurses Association.

GEORGIA STATE NURSES ASSOCIATION,
Atlanta, Ga., May 12, 1958.

Senator LISTER HILL,
Chairman, Subcommittee on Department of Labor, and Health, Education and Welfare of the Senate Committee on Appropriations, Senate Office Building, Washington, D. C.

DEAR SENATOR HILL: In behalf of the Georgia State Nurses Association, I am requesting your support of the traineeship program and the increase of funds to provide traineeships for registered nurses. The reasons for this request are:

1. The increased demands upon the nursing profession to staff and provide adequate supervision to fill the needs of rapidly expanding hospital services aided by the Hill-Burton program and others. At the same time we wish to maintain a high level of nursing care for the already existing hospitals and to keep up with the demands brought on by their expansion.

2. The increased demands upon our schools of nursing to train more and more highly qualified nurses to fill these needs require more and better nursing instructors.

3. Due to the increased number of practicals and aids there is an increasingly heavy load on the professional nurse for supervision for which we need more well-trained supervisors.

4. As public health services expand there is a greater need for more well trained public health nurses.

5. With the increasing number of aged persons in our population there is extra demand for professional nurses to supervise the increasing number of nursing homes and other facilities which care for the aged and invalids.

We will greatly appreciate your consideration of these matters.

Sincerely yours,

MRS. MILDRED B. PRYSE, R. N.,
Executive Secretary.

SOUTH DAKOTA STATE NURSES' ASSOCIATION INC.,
Sioux Falls, S. Dak., May 14, 1958.

Senator LISTER HILL,
Chairman, Subcommittee on Departments of Labor, Health, Education, and Welfare, United States Senate, Washington, D. C.

MY DEAR SENATOR HILL: I am a nurse from South Dakota; however, I represent the thinking of 950 nurses who are members of the South Dakota Nurses' Association. We are greatly concerned about the bill which provides traineeship funds for nurses under titles I and II of Public Law 911.

Several nurses in a State as small as South Dakota have made use of these funds and returned to their former position prepared to do a much better job.

We feel it is a grave necessity to increase the funds at this time and were greatly dismayed to learn that the House of Representatives did not increase the appropriations in face of the critical need for health personnel.

There are increasing demands placed on the nursing profession today which have been brought about by the growing population, and the increase in the number of the aged, and the expanding health services—especially new hospitals in the rural communities. In order that the needs of health and hospital centers are met, we must prepare nurses in administrative and supervisory capacities. They will then be qualified to make the best possible use of new facilities more economically and maintain a staff prepared to do the best job. The future of our schools of nursing depends entirely on good teaching staff.

With sputniks in prominence, we realize the armed services will have to receive their share of moneys for research. However, we must not neglect the health of our American people.

It is for this reason, I am asking, as a nurse for the nurses of South Dakota, you and your committee to give some very serious consideration to increasing the appropriations for the traineeship program under titles I and II of Public Law 911.

We sincerely appreciate your interest in furthering this program.

Yours very sincerely,

AGNES B. THOMPSON, R. N.,
Executive Secretary, SDNA.

ISTHMIAN NURSES ASSOCIATION OF THE CANAL ZONE,
Cristobal, C. Z., May 12, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Departments of Labor, and Health, Education, and Welfare of the Senate Committee on Appropriations, United States Senate, Washington, D. C.

DEAR SENATOR HILL: I am writing you today to present the views of the Isthmian Nurses Association of the Canal Zone on certain items relating to the field of nursing which appear in the appropriations in H. R. 11645.

As a constituent member of the American Nurses Association, it was with dismay that we learned that the House of Representatives did not increase the appropriation for the nurse traineeship program established under titles I and II of the Health Amendments Act of 1956.

The Canal Zone looks to the 48 States to provide the nurses to staff its hospitals and allied health facilities. With the present demand for qualified administrators, supervisors, and teachers of nursing far in excess of the number now available, or likely to be graduated in the future unless substantial amounts of scholarship aid is provided, the Canal Zone and other Government services will suffer from a lack of qualified nurses.

Located as is the Panama Canal in so strategic an area as to be literally the crossroads of the world, the nursing care given in the Canal Zone is viewed by our sister Republics and all who pass through our health facilities as an example of the very best nursing care being performed by American nurses.

Therefore, the Isthmian Nurses Association urges that the appropriation for title II of Public Law 911 be increased to at least the $7 million recommended by the American Nurses Association.

Further, the Isthmian Nurses Association urges that the appropriation for title I of Public Law 911 be increased to at least $5 million. With the growing emphasis on preventative and rehabilitative services, and home-care programs for the chronically ill, many more public health nurses will be needed in the Canal Zone.

The Isthmian Nurses Association trusts that due consideration will be given by your committee and Congress to the needs of those programs which are so vital to the health and welfare of our people.

Yours respectfully,

R. ELIZABETH MARSH, R. N., *President.*

LETTER FROM REPRESENTATIVE LEE METCALF

Senator HILL. I have received a letter from the Honorable Lee Metcalf, Member of Congress from the First District of Montana, urging this committee to approve additional funds for Indian health services, as well as $1 million in excess of the $750,000 approved by the House for the cooperative program of joint Indian and community health facilities authorized by Public Law 151, 85th Congress. Congressman Metcalf's letter will be included at this point in the record.

(The letter referred to follows:)

CONGRESS OF THE UNITED STATES,
HOUSE OF REPRESENTATIVES,
Washington, D. C., May 19, 1958.

Senator LISTER HILL,
Chairman, Subcommittee on Appropriations for Departments of Labor and Health, Education, and Welfare, and Related Agencies, Senate Committee on Appropriations, Washington, D. C.

DEAR SENATOR HILL: Dr. G. D. Carlyle Thompson, chairman of the Indian affairs committee of the Association of State and Territorial Health Officers, has sent me a copy of his letter to you urging an increase in the appropriation for Indian health.

He specifically asks for an increase in two items. The first, for an increase in the general appropriation. Senator Murray, in his appearance before your subcommittee, stated the beliefs of the Montana congressional delegation upon this point in also urging such an increase.

The second point was also well stated by Senator Murray when he asked for at least an additional $1 million for the cooperative program of joint Indian and community health facilities authorized by Public Law 151 of the 85th Congress. You will recall there was no budgeted item for this because Public Law 151 was not enacted until August 16, 1957. The House appropriated $750,000 to get it underway. This letter is to give you a specific example of how an additional appropriation of at least a million dollars, as requested by Senator Murray, will be in the public interest and actually save the Government a good deal of money.

On May 16, 1958, allocation of a Hill-Burton grant in the amount of $180,000 to the hospital at Polson, Mont., was announced. On May 15, bids were opened for the Polson hospital.

Under alternate 1 for 32 beds, lacking certain services needed in a hospital in that area, such as a laundry, the total low bid was $602,728.52. The Hill-Burton

portion would be $241,091.41. Alternate 2, which would make the project 40 beds plus some additional facilities, had a low bid of $688,479.55. The Indian portion would be $137,695.91 and the Hill-Burton portion $220,313.46.

The eight additional beds are those that would be built under Public Law 85–151. Thus, 8 additional beds for Indians can be built for approximately $86,000 additional. In order for the Polson hospital to participate in funds under Public Law 85–151, it is necessary that there be at least an appropriation for this fiscal year of $1,750,000.

While the 40-bed bid exceeds the 32-bed bid by approximately $86,000, it must be realized that the items included under alternate 2 could not be added at a later date at this cost, for to do so would require considerable remodeling and additional construction costs which would be necessary due to conditions existing because of the completion of alternate 1 independently. An example of this is a complete stair well from the ground to the top floor and all of one exterior wall would have to be duplicated if the alternate 2 portion of the proposal were added after alternate 1 had proceeded very far under construction.

The hospital has until June 15 to award contract under alternate 1 and has until August 1 to act on alternate 2 under the figures bid. After August 1 alternate 2 will have to be rebid. It is also possible to modify alternate 1 to reduce the total cost by changing some of the service elements of the hospital, such as the heating plant which was designed as other services of the hospital were designed, to serve the 40-bed facility.

Polson has an excellent bid in that the cost per bed under the 40-bed plan is only $17,200. It seems quite evident that the Federal Government will be unable at any time to obtain hospital bed construction for Indian use in the Flathead area at so little cost as in this project; and when you consider that the cost of the Indian portion built separately when added to the larger Hill-Burton sum under alternate 1, the ultimate cost to the Federal Government will be substantially lower, all funds considered. The ultimate cost to all taxpayers, as well as private contributors for the total project, will be considerably greater if the contracts for this project cannot be let for both alternates before August 1.

This example forcibly demonstrates the merit of the cooperative approach of Public Law 85–151 and the need for additional funds at this time to give the community a better hospital and, at the same time, permit the Federal Government to fulfill its responsibility for Indian health facilities at a minimum cost.

Sincerely,

LEE METCALF.

LETTER FROM SENATOR SALTONSTALL

Senator HILL. Senator Saltonstall, a member of this committee, has written to me transmitting two letters which he has received from Mr. William Wolbach, president of Children's Hospital in Boston, and Dr. George Packer Berry, dean of the Harvard Medical School, urging that funds be appropriated for overhead expenses of medical research. Senator Saltonstall's letter, along with the other two referred to, with attachments, will be included in the record at this point.

(The letters referred to follow:)

UNITED STATES SENATE,
COMMITTEE ON APPROPRIATIONS,
May 16, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Appropriations,
United States Senate, Washington, D. C.

MY DEAR MR. CHAIRMAN: I am enclosing herewith two letters which I have received from prominent citizens in Massachusetts, Mr. William Wolbach, president of Children's Hospital in Boston, and Dr. George Packer Berry, dean of the Harvard Medical School, who urge that funds be appropriated in the 1959 Department of Health, Education, and Welfare budget for overhead expenses for medical-research programs.

I believe that both Mr. Wolbach and Dr. Berry are intimately acquainted with this problem and are well qualified to speak on the subject, and I would therefore

appreciate your inserting their letters in the record of the Senate hearings on the 1959 appropriation bill for the Department of Health, Education and Welfare.

Thank you for your consideration of this matter. With kind regards, I am,

Sincerely yours,

LEVERETT SALTONSTALL,
United States Senator.

Enclosures (two).

THE CHILDREN'S HOSPITAL,
Boston, Mass., May 6, 1958.

Hon. LEVERETT SALTONSTALL,
Senate Office Building, Washington, D. C.

DEAR SENATOR SALTONSTALL: The Appropriations Committee of the House concerned with the budget requirements of the Department of Health, Education, and Welfare has once more recommended against any increase in the rate of overhead allowance in relation to research grants made by the Department itself and is understood to have the active support of both the Secretary and the Surgeon General as a matter of urgency and importance. Briefly, the attitude of the House Appropriations Committee was that the funds of the National Institutes of Health were not appropriated "for the purpose of general assistance" to research institutions. The committee, moreover, did not feel that the research programs of the National Institutes of Health would suffer by maintaining the current level of overhead allowance (report of the Appropriations Committee to accompany H. R. 11645: pp. 17–18).

We at the Children's Hospital can only deplore the adverse recommendations of the House committee. Speaking from our own experience only, the reasoning of the committee appears to us invalid on both counts. The accounting for our research program is of such a nature that we are able to calclulate the indirect cost of research with some accuracy. Faced with a heavy deficit in research overhead, it seems almost inevitable that we may have to apply a strict ceiling to our research program.

Briefly, the facts are as follows: During the past fiscal year our research program totaled approximately $1¾ million. Of this amount about $850,000 represented projects supported by grants of the National Institutes of Health. During the same fiscal year the total deficit in research overhead amounted to $122,000, of which we were out of pocket to the extent of about $85,000 as a result of research projects of the National Institutes of Health.

In seeking a higher rate of overhead allowance we are clearly not looking for general assistance in our overall operations. Instead we are seeking adequate reimbursement of overhead costs attributable to the various research projects undertaken here on the basis of grants from the National Institutes of Health.

Research, with patient care and teaching, represents one of the three great functions of the Children's Hospital. The staff comprises a group of medical scientists unsurpassed anywhere in their own field. The hospital commands both the physical facilities and the clinical material essential for a broad research program. The past achievements of the hospital's staff are impressive, to say the least.

In the circumstances it would only be with the utmost reluctance that the trustees of the Children's Hospital would consider imposing any limitations on the development of the research program. Frankly, however, that may have to be our ultimate decision if there is no prospect of being reimbursed for these heavy and increasing out-of-pocket costs.

As far as I am concerned, this is no ordinary "write your Senator" type of letter. I write only because the inequity of the present situation is eroding our general funds and threatening our whole financial structure. Other voluntary hospitals, which are attempting to carry out important research work for the Government, are in the same position as we are, and I believe some are already approaching desperate financial straits.

Hospitals such as ours have a priceless service to offer in the quality of their staffs. In fairness to them and to the public as a whole, they should be encouraged to take on all the useful research projects that time and facilities will permit. Unfortunately, the clearly identifiable losses from inadequate overhead-costs allowances increase in proportion to the size of the research effort. These costs cannot be passed onto patients of the hospital, and they are therefore placing an entirely unreasonable burden on investment income and endowment which cannot be sustained much longer.

Anything you can do to make sure that this situation is properly understood by the members of Senator Hill's committee and your colleagues in the Senate would be a tremendous service, not only to the Children's Hospital but to the whole medical community. If there is anything we can do to help in the presentation of the facts, we would be most happy to cooperate.

Sincerely yours,

WILLIAM W. WOLBACH, *President.*

HARVARD MEDICAL SCHOOL,
Boston, Mass., April 21, 1958.

Hon. LEVERETT SALTONSTALL,
Senator from Massachusetts,
United States Senate, Washington, D. C.

DEAR SALTONSTALL: Only a healthier America can be a more productive America—on the health of our people depends their happiness and security. Medical science is the wellspring of modern medical care which is fundamental to health and well-being. Because you believe this, you have been voting larger and larger appropriations for support of medical research. Naturally, as dean of the Harvard Medical School, I think that your support of medical research has been wise—indeed, essential to the national well-being. I hope that you will go on providing increasing funds to the extent that they can be wisely used in America to gain the new knowledge essential for controlling the major killers and cripplers of our people.

The medicine of tomorrow is in the laboratory today. Only in our universities, medical schools, and associated hospitals can be optimally combined the acquisition of knowledge with the education and training of tomorrow's doctors and medical scientists. It is imperative, therefore, that the funds made available by the Federal Government to support fundamental research in the medical sciences at educational institutions be made available in a way that will strengthen—not weaken—these institutions.

Currently, such is not the case. Universities, particularly, are frequently forced to rob Peter to pay Paul in that they must take their already-inadequate educational dollars away from the teaching of students to meet the indirect costs of the research programs they are undertaking. The Federal Government currently pays only a small portion of these indirect costs. Paradoxically, the very universities best equipped by virtue of their top-flight personnel and laboratory resources to do research, and hence the largest recipients of the grants from the Federal Government, are the most hard-pressed. To prove my point, I refer you to the attached copy of my letter of January 16, 1958, to Dr. James A. Shannon, Director of the National Institutes of Health. Let me explain the origin of this letter. I am serving as one of Secretary Folsom's consultants on medical research and education—under the effective leadership of Gen. Stanhope Bayne-Jones, who is serving as chairman of the group comprising the Secretary's consultants, we have been intensively studying the detrimental effect on universities of the inadequate reimbursement for the indirect costs of research.

My letter to Dr. Shannon was written following extensive discussions between the consultants and Dr. Burney, the Surgeon General of the United States Public Health Service, with Dr. Shannon, and with many of their colleagues at the National Institutes of Health at Bethesda, concerning this burning issue. My letter to him shows what has happened at the Harvard Medical School during the past dozen years. In this brief period, grants from the Public Health Service to the medical school for the direct costs of research have increased from $23,000 to $1,700,000, in round numbers (please see table). Because the contribution to indirect costs has been so inedaquate, Harvard has had to divert from the medical school's general income, amounts that have risen from 0.8 to 21.6 percent (see table). It is in the national interest that we do all the fundamental research we can at the Harvard Medical School—doing so is now forcing us to divert more than a fifth of our educational income. This cannot go on.

This problem was beautifully presented on behalf of the Nation's medical schools by Dr. Lowell T. Coggeshall, deal of the division of biological sciences at the University of Chicago School of Medicine, and currently president of the Association of American Medical Colleges, when he testified at the recent hearings of the House Appropriations Committee. I consider it extraordinarily unfortunate that the House of Representatives has just passed the health, education, and welfare bill without making provision for the reimbursement of indirect costs of research beyond the present inadequate 15 percent. My purpose in

writing is to urge you, and through you your colleagues in the Senate, to support the payment of the full costs of research. Perhaps then, the payment of the full costs of research can be achieved by the conference committee.

In my letter to Dr. Shannon, I have expressed our conviction at Harvard that curing the problem of inadequate reimbursement for the indirect costs of research is so urgent that it should be cured even at the expense of curtailing some research activities. This point of view, apparently, was not supported by Mr. Fogarty and the members of his committee in the House. I believe that the best solution would be the voting of sufficiently larger amounts in the several research categories to make possible the full reimbursement of indirect costs; but is such increases are not deemed wise, removal of the present 15 percent restriction is vital.

Sincerely yours,

GEORGE PACKER BERRY, M. D., *Dean.*

HARVARD MEDICAL SCHOOL,
Boston, Mass., January 16, 1958.

Dr. JAMES A. SHANNON,
Director, Nation Institutes of Health,
United States Public Health Service, Bethesda, Md.

DEAR DR. SHANNON: The question is being raised as to whether a full overhead reimbursement policy is currently so important to the Nation's medical schools that the United States Public Health Service should immediately implement such a policy even though there be no additional funds specifically allocated for the purpose. In my view, the answer to this question is an unqualified "yes." Below, I shall endeavor to explain the reasons for my conviction.

Before World War II, our medical schools were financing their operations primarily from tuition, endowment income, and—for State and municipal institutions—governmental appropriations. Support from these sources provided for the schools sufficient continuity and flexibility to enable them to make their academic programs vital and effective—at least in a relative sense. Each medical faculty, within the limits of its abilities and resources, was free to plan its own teaching research, and patient care programs. In other words, the medical faculties had the freedom needed to discharge their whole responsibility to society. Gifts and grants for special purposes were not a significant part of a medical school's total program—they were sought and used to provide additional opportunities for teaching and scholarly work.

During World War II, the public suddenly recognized the unique capacity of the faculties of our medical schools to seek and acquire new knowledge through research, knowledge from which could and would flow a deeper understanding of disease. The capacity to prevent and cure disease grew rapidly—ever since the war, the public has demanded that this rate be accelerated. Thus, the Congress has been stimulated to appropriate larger and larger funds to support research in our medical schools for specific purposes. Such project support has, of course, also come from other sources, but the Public Health Service has been the primary contributor. All this you know better than I do. I mention this explosive development merely to set the stage for the comments I wish to make presently concerning the impact on the medical schools of the ever-larger amounts of new money earmarked for research purposes.

Important and far-reaching changes have already resulted in our medical schools. The tempo and scope of research activity have grown tremendously. The interdependence of clinical medicine and the physical, medical, and behavioral sciences has become ever more clear. So has the need for an expansion of postgraduate medical education and training. Faculties of medicine and university administrators can see anew the creative role that can be played in our medical schools by devoted scholars.

Paradoxically, however, medical faculties are increasingly less able to plan and move in a considered and orderly fashion to consolidate the gains that have been made and to press ever forward. Inflation has robbed the medical schools of half the purchasing power of their endowment income. Tuition cannot be further raised sufficiently to meet the schools' needs without pricing medical education beyond the reach of many excellent students. Finally—this is important—the project system of research support, despite great efforts to administer it broadly, has inevitably by its very nature emphasized short-range objectives

while simultaneously depriving the faculties of medicine, to a substantial degree, of the use of their own continuing (hard) income to finance long-range educational objectives. The attached tabulation demonstrates clearly the extent to which this deprivation is adversely affecting the Harvard Medical School.

The tabulated figures show instantly the extent to which my school's income funds have had to be used increasingly to meet unreimbursed indirect expenses of the research programs supported by grants from the Public Health Service. (Please note that I make no mention of the similar problem resulting by inadequate reimbursement of indirect costs received from many foundations—fortunately, not for all.) The indirect costs listed in the tabulation have been computed according to the so-called Mill's formula. This formula, as you well know, was developed by the armed services and the universities for the measurement of the indirect expenses incurred by educational institutions in the performance of research. This formula has been incorporated in section XV of the Armed Services Procurement Regulations, and it is currently used as the basis for the reimbursement of indirect expenses by all agencies of the Department of Defense and the Atomic Energy Commission in their university programs.

The amounts involved in dollars and the corresponding percentages of Harvard's general income funds have increased steadily year after year, as the tabulation shows. The trend must be reversed as soon as possible in order to free the school's own funds for use in supporting other (than research) aspects of our academic programs in medicine. The salaries of teachers must be raised, more members of the faculty must be given the security of tenure, the curriculum must be improved through experimental study and extended into new areas. Most important of all, the faculty of medicine must regain its control over the expenditure of general income funds, of which more than one-fifth is currently consumed in meeting the unreimbursed part of the indirect costs of research. I must add another point. Were serious dislocations in our research programs to result from a temporary reduction in available funds for projects, such costs could and would be met by the medical school from its general income funds thus released.

Less pain would be caused, obviously, should additional funds be made available by the Congress to the Public Health Service to permit the immediate implementation of a full-overhead reimbursement policy. The need by the medical schools for the immediate relief of this problem is so pressing, if long-term damage to their educational programs is to be avoided, however, that I believe you should move immediately to implement the full-overhead reimbursement policy even though doing so would mean a temporary reduction in the amounts available to support project research. At the Harvard Medical School the receipt of a lessened total for research support from the Public Health Service—but with full-overhead reimbursement—would be greeted with acclaim. Why? Because the creeping gangrene would then have been stopped. Amputations are preferable to the dissolution of the whole body.

You and I have been exploring these increasingly serious problems for a number of years. That is why I write the present letter with a feeling of urgency. Please forgive me for its vehemence and length.

Sincerely yours,

GEORGE PACKER BERRY, M. D., *Dean.*

Utilization of general income funds by the Harvard Medical School in connection with USPHS supported programs (availed of basis)

	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
(*a*) Continuing general income	$1,000,758	$1,023,907	$1,055,804	$1,207,020	$1,242,666	$1,278,244	$1,299,330	$1,409,539	$1,468,381	$1,610,640	$1,648,995	$1,733,090
(*b*) Expended from PHS grants for direct costs	23,085	111,660	236,061	299,588	364,522	523,699	575,796	717,249	935,537	1,015,260	1,326,500	1,737,334
(*c*) Total indirect costs of expenditures under (*b*) computed on basis of Mill's formula	8,311	39,081	82,621	104,856	127,583	183,295	202,529	262,037	328,438	355,341	464,275	608,067
(*d*) Contribution from PHS to indirect costs	----------	3,182	10,132	12,699	17,599	32,911	36,905	95,272	72,639	77,898	145,445	233,160
(*e*) Remainder of indirect costs met by medical school from general income	8,311	35,899	72,489	92,187	109,984	150,384	165,624	166,765	255,799	277,443	318,830	374,907
(*f*) (*e*) as a percentage of (*a*)	0.8	3.5	6.9	7.6	8.9	11.8	12.7	11.8	17.4	17.2	19.3	21.6

LETTER FROM DR. MORRIS BRAND

Senator HILL. Dr. Morris Brand, president of the American Labor Health Association, has written to me urging this committee to approve $2 million for the occupational health program of the United States Public Health Service, as well as $14 million for the construction of an occupational health center, plus $500,000 for acquisition of a site for such construction. Dr. Brand's letter, with enclosures, will become a part of the record at this point.

(The letter referred to follows:)

AMERICAN LABOR HEALTH ASSOCIATION,
May 9, 1958.

Hon. LISTER HILL,
Chairman, Senate Committee on Labor and Public Welfare,
United States Senate, Washington, D. C.

DEAR SENATOR HILL: As in 1957, this association has reviewed the proposed budget for the United States Public Health Service and respectfully requests that you take whatever steps necessary within your power to correct a deficiency which if permitted to remain will have an unfavorable effect not only on the immediate but also on the future health of our Nation. We are referring to the unbelievably insufficient amount of $675,000 requested in the 1959 budget for the occupational health program of the USPHS.

Our association has studied the program proposed by the occupational health program (copy attached) and we are of the opinion that the program's recommendations for revision and expansion are practical and long overdue. This will require a minimum of $2 million, at least $500,000 for the acquisition and development of a site for a proposed occupational health center and about $14 million more for constructing and equipping the center. Expansion of the program will begin to meet the needs of the workers as compared to the limited services thus far provided. Obviously then the budgetary request of $675,000 will result in a further curtailment of existing services and this in the face of rising costs. In a nation which considers itself to be on a high health plane, it is inconceivable that we cannot afford the additional amount necessary to establish a research facility with an adequate and properly trained staff in order to learn the causes, methods of prevention, detection, and elimination of occupational health hazards—all of which would reduce the number of occupational illnesses, injuries, disabilities, dollar losses to industries, workers, and communities the unnecessary unhappiness in many homes, and deaths. The technical committee report made at the 1938 national health conference recommended that a budget of $20 million was necessary for an adequate occupational health program.

We are attaching copies of resolutions supporting a greatly expanded occupational health program in the United States Public Health Service and State and local health departments as adopted by the International Chemical Workers Union in 1957 and the governing council of the American Public Health Association in 1956 and 1957; and a copy of a resolution passed at the annual convention of the International Association of Industrial Accident Boards and Commissions in 1955 recommending the initiation of a prevalence study of pneumonoconiosis among coal miners and allied occupations.

We would appreciate it if you would draw the contents of this letter to the attention of the committee and have it included in the recorded proceedings of the committee.

Sincerely yours,

MORRIS BRAND, M. D., *President.*

A PROPOSED OCCUPATIONAL HEALTH PROGRAM

Since 1912, the Public Health Service has had as an organizational unit an occupational health program whose primary purpose has been to prevent and control occupational diseases. That program has prospered in its mission and during the past 40 years has made significant contributions to the occupational health movement. The most significant of these contributions are: (1) Provision of a healthful working environment; (2) development of epidemiologic approach

to occupational diseases; (3) a training ground for specialists in occupational health; (4) development of State and local occupational health programs; and (5) development of health services in industry.

The impending revolution in industrial technology necessitates a new look at occupational health and a redesigning of the program of the Federal Government to more adequately meet the needs of the American worker. There are many factors that have a strong and determining influence on the occupational health problems of the future. In considering the future activities of the program four of these determining factors have been taken into account. These are: (1) The 20th century industrial revolution; (2) industry's apparent readiness to accept the preventive health concept as a part of occupational health; (3) labor's interest in health insurance and medical care and the inclusion of the concept of prevention in labor-sponsored programs; and (4) increasing occupational health problems in Federal installations. The program needed to meet this challenge requires expanded and new activities in 7 different areas: (1) Research, (2) promotion and development of health services, (3) studies of industrial health plans and health benefits under collective bargaining, (4) technical services, (5) training, (6) intelligence collection, and (7) research dissemination and education.

PROPOSED PROGRAM

I. Research

Under the more comprehensive and realistic concept of occupational health new research problems are posed. Problems of emotional disturbances and human relations thus become integral parts of the worker's health pattern. In the past, occupational health has been primarily concerned with the effects of the working environment on groups of workers. The industry of the future with its emphasis on automation, electronic, and chemical operations and nuclear energy may introduce numerous psychologic, pathologic, and physiologic health problems, some of which may have far more reaching effects than those of the past. Hence, our present technique of the epidemiologic study of occupational diseases and hazards must be revised to consider the reaction patterns of individuals as well as the reaction pattern of masses. This leads us directly into the field of human engineering in which it will be necessary to measure the human facilities of perception, action, reaction, and decision as a part of the man-machine system. Proposed research, both in this new area and other continuing functions of the occupational health program, includes:

A. Studies in applied physiology and human engineering:
   1. Pulmonary physiology.
   2. Psychologic studies of worker's performance.
   3. Fatigue and exhaustion among workers.
   4. Physical and psychologic capacity in relation to job placement.

B. Studies in the epidemiology of occupational diseases:
   1. Chest disability in bituminous-coal workers.
   2. Effects of vibration.
   3. Studies of newer commercial metals and other problems of present-day significance.

C. Industrial toxicology.

Emphasis will be shifted from the manner of determination of the toxicity of industrial chemicals to more fundamental research on the effects of toxic substances and physical agents. From knowing the way in which substances exert their influence, it is often possible to develop means for detecting subtle changes in the body while they are still reversible and to develop means for prevention and treatment. Aside from its importance as a screening tool, toxicology holds promise of becoming a valuable adjunct in the therapy and treatment of diseases. Preliminary work has indicated that it may be possible to detect subtle changes while they are still reversible and while therapy and prevention are possible. Studies of pretoxicosis may thus lead to techniques which may permit diagnosis of disease conditions long before they become recognizable by usual diagnostic cirteria.

Other unmet research needs include study of the effects of combinations of potentially toxic materials as found in the complex industrial environment and the effects of exercise and temperature as well as alcohol and environmental factors on the toxicity of various agents.

II. Promotion and development of health services

An emerging health problem that represents at once a need and an opportunity concerns itself with the promotion and maintenance of the health of the worker.

Despite the millions of dollars which are presently being expended for research on diseases of the adult, little concentrated effort is being made for applying this knowledge. The provision of preventive health services at or through the place of work has been demonstrated to be a practical means for reaching large segments of adults.

Studies on the economics of industrial health services have been undertaken by the occupational health program through research contracts with several schools of business and public health. By the end of 1956 these studies which deal with the cost to management of employee sickness and injury, the cost and value of employee-health services, the attitudes of management regarding such services, and the channels through which management receives information on health matters will have been completed. The next step is to bring this information to management and labor groups and to participate in demonstrations which will encourage health departments, management, chambers of commerce, medical societies, and workers to extend coverage of employee-health services.

III. Studies of industrial health plans and health benefits under collective bargaining

The rapid expansion of health-insurance and medical-care programs for industrial workers justifies a critical analysis of the relative benefits provided through such programs, their impact on the general health problem of the Nation, the attitude of medical societies, the community and worker to such plans and their success as a means of meeting the cost of medical care. Associated with this is the pressing need for additional studies in illness absenteeism. The data yielded by such studies would contribute materially in determining the Nation's industrial morbidity patterns and in designing public-health programs to meet these needs.

IV. Technical services

With new occupational health hazards continuously arising, the need for assistance to States assumes greater importance. There are two special areas which need immediate attention. The first is in agricultural health where because of a changing agricultural economy the rural populaiton is being exposed to a multiplicity of chemical agents, many of which have an extreme degree of toxicity. Our present efforts in this area consist of a demonstration program in cooperation with the South Dakota Department of Health. From this activity it is hoped to obtain sufficient information to initiate agricultural health programs in other State and local health departments. There is also a pressing need for industrial health services in Federal installations. Except for the Department of Defense and the Atomic Energy Commission, no Federal agency provides services for its employees. There has been a dramatic change in Government operations in the past decade. Presently the Federal Government is engaged in research and pilot-plan operations which involve numerous and severe health hazards. The study of these hazards would not only protect the employees presently exposed but would also serve to define these problems before they are translated to commercial operations.

V. Training

As more emphasis is placed on promoting industrial health services and the solution of new occupational health problems, it becomes increasingly important for State and local health programs to assume greater responsibility. While many of these State units are aware of, and desire to meet, this responsibility, they are unable to do so because of the lack of trained leadership. Thus, it becomes imperative that training be provided for local health administrators and personnel in State health departments. In addition, it is also desirable for universities to assume leadership in the training of personnel associated with nongovernmental agencies.

VI. Collection of occupaitonal health intelligence

Keeping abreast of advances in industrial technology and the potential health hazards associated with these developments has always been a major problem in occupational health. The usual public-health intelligence channels, particularly morbidity and mortality data, do not meet this need since occupational health involves numerous diseases, many of which are not reportable. Thus, the need to establish a system of uniform and continuous activity in the collection of occupational health intelligence becomes paramount. Contact should be established with scattered and uncoordinated sources of data which can be

brought together to predict possible answers to questions concerning the role of new environmental factors in industrial processes and the causation of occupational diseases and potential health problems. In addition, the proposed intelligence service would maintain current files on activities of research organizations regarding types of problems investigated, investigational techniques, and preliminary findings.

VII. Information and education

A serious obstacle to the application of research findings is the failure to get information to those who can take action in applying these findings. Therefore, there is great need to intensity informational and educaitonal activities. Training aids and visual aids should constitute an important part of this effort. These should be primarily developed to assist in demonstrating the objectives, services and accomplishments of employee-health programs as well as the techniques used for the control of occupational diseases.

VIII. Occupational Health Center

The lack of adequate facilities and personnel and financial shortages have markedly restricted the occupational-health program. It is completely unrealistic to anticipate the development of the above program in the absence of essential equipment and work space. The location of the Occupational Health Center should be in close proximity to a large teaching center with an expressed interest in occupaitonal health and medical care facilities for the diagnosis, treatment and rehabilitation of workers afflicted with occupational diseases. The center should also be easily accessible to the major industrial developments. The construction of such a center will substantiate the permanence of the program and encourage a continuing expansion essential for the conservation of human resources.

RESOLUTION PASSED BY INTERNATIONAL CHEMICAL WORKERS UNION, OCTOBER 1957

Whereas the problems of occupational health and safety are not diminishing but, with the development of atomic energy, new chemical processes and automation, these problems are growing more complex; and

Whereas each year at least 15,000 workers are killed and 2 million injured from occupational accidents or diseases, and an undetermined number are injured by exposure to nuclear radiation and chemical hazards which result in cancer, diseases of the lungs, and other chronic diseases which are frequently not attributed to occupational exposure because of lack of investigation, lack of reporting, and inadequacy of workmen's compensation laws; and

Whereas health services in industrial plants are for the most part inadequate or nonexistent and most workers are employed in small plants where such services usually are not provided and the health programs in the larger plants are frequently inadequate and limited essentially to emergencies; and

Whereas the governmental agencies, Federal, State, and local (health and labor departments), charged with protecting the health of the workers are for the most part grossly inadequate in their resources and services, and they suffer from lack of funds and personnel and often from lack of authority. For example, the congressional appropriation for 1958 for the entire occupational health program of the United States Public Health Service was only $675,000, not enough to permit any expansion of their present limited program, and at least 9 of our States have no occupaitonal health units in their public health or labor departments and in all of the State occupational health units in the entire country there are today only 27 physicians employed; and

Whereas there is no uniformity of industrial health codes and standards and the States differ in the hazards regulated and in their regulations for the same hazards; and

Whereas the workmen's compensation laws are, in almost all cases, sadly behind the times and they are usually inadequate in provisions for compensation, for medical care and rehabilitation, and most of them have not been brought up to date to permit equitable recognition and compensation for the injuries inflicted by radiation and the chemical hazards which cause long-term chronic diseases; and

Whereas there is no uniform reporting of occupational diseases and in many States no reporting at all and as a result no one can say how many or what kind of occupational diseases are occurring: Therefore be it

Resolved, That the International Chemical Workers Union, representing many of the Nation's workers exposed directly to the old and new health hazards of industry—

1. Support more adequate appropriations for, and strengthening of, the health and safety services, and research programs of the United States Public Health Services, the United States Labor Department, and the State and local health and safety agencies.

2. Urge the adoption by the Federal and State Governments of uniform and adequate health and safety codes, utilizing the modern standards set forth by the American Standards Association, the International Labor Organization, and World Health Organization.

3. Take all necessary measures to improve the workmen's compensation laws.

4. Implement as soon as possible the establishment of a full-time health and safety department in the union as endorsed by several previous conventions.

5. Recommend the the international executive board look into the advisability of joining the labor council of the National Safety Council.

6. That the local unions with the assistance of the international union include in their collective-bargaining contracts wherever necessary, adequate provisions for health and safety.

Resolution on Implementation of Occupational Health Programs

Adopted by Governing Council, American Public Health Association, at its 85th annual meeting in Cleveland, Ohio, November 13, 1957

Whereas the American Public Health Association previously has emphasized the need for occupational health programs required to support the economy and defense of the Nation; and

Whereas scientific and technological progress is multiplying the health hazards of employed persons; and

Whereas concerted action of governmental occupational health officials and the many disciplines concerned are essential to effective occupational health programs: Therefore, be it

Resolved, That the American Public Health Association reemphasize the need for expanding occupational health programs, and be it further

Resolved, That adequate funds be provided for the Public Health Service occupational health program, and for stimulating and strengthening State and local occupational health programs, and be it further

Resolved, That the American Public Health Association offer the expert resources of the association to appropriate legislative committees for the development of legislation and for the support of appropriations for expanding occupational health programs.

Intensification of Occupational Health Activities

RESOLUTION UNANIMOUSLY ADOPTED BY THE GOVERNING COUNCIL, AMERICAN PUBLIC HEALTH ASSOCIATION, AT ITS 84TH ANNUAL MEETING IN ATLANTIC CITY, N. J., NOVEMBER 14, 1956, AND PUBLISHED IN THE AMERICAN JOURNAL OF PUBLIC HEALTH, JANUARY 1957

Whereas the health and well-being of American workers represents the Nation's greatest economic and social resource; and

Whereas the need for research on the causes and prevention of occupational disease is being accentuated by a rapidly expanding industrial technology resulting in the introduction each year of hundreds of new compounds of unknown toxicity; and

Whereas industrial health programs which represent a fruitful approach for the application of preventive health technics to a large segment of our adult population too often are handicapped by the lack of knowledge about the new toxic substances contantly being introduced by industry; and

Whereas the occupational health program of the United States Public Health Service has, in spite of its limitations, contributed outstandingly to the knowledge of the causes, types, and control of occupational diseases and the promotion of preventive health services in industry, but has been unable because of inade-

quate funds, facilities, and personnel to expand its services to meet the ever-increasing toxicologic problems: Therefore be it

Resolved, That the American Public Health Association recommends that the Nation's industries both through management and labor, the appropriate State agencies, and the United States Public Health Service intensify the support and active interest in the Nation's occupational health activities and expand occupational health programs to meet the Nation's need; and be it further

Resolved, That the Congress be urged to appropriate substantial funds specifically to meet these needs.

A RESOLUTION FOR A PREVALENCE STUDY OF PNEUMOCONIOSIS AMONG COAL WORKERS IN THE UNITED STATES

Passed at the annual convention of the International Association of Industrial Accident Boards and Commissions in Chicago on September 29, 1955

Whereas in the course of the panel discussion on coal workers pneumoconiosis at the convention of the IAIABC on Tuesday, September 27, 1955, in Chicago, by a panel of medical experts, headed by Dr. J. C. Gilson, pneumoconiosis research unit of England; Dr. Joseph Martin, chief, internal medicine, Memorial General Hospital Association, West Virginia; Dr. Frank Princi, Kettering Institute of Applied Physiology, University of Cincinnati, Ohio; Dr. David Waterman, Knoxville Chest Group, Tennessee; with Dr. Thomas F. Mancuso, chief, division of industrial hygiene, Ohio Department of Health, acting as moderator, it was estimated that in excess of 50,000 coal workers were afflicted with this disease;

Whereas as a result of many years of study and research, the extent and nature of this occupational disease is well recognized in Great Britain, but is not well recognized in the United States, nor has any study or research been made in this country;

Whereas there is an urgent need for a prevalence study of that disease in the United States in order that we may determine what course of action should be taken in its diagnosis, treatment, and prevention; and

Whereas the records of the annual and biannual examinations in Canada has shown the cost to be infinitesimal: Be it therefore

Resolved, That the IAIABC in convention assembled this 29th day of September of 1955, respectfully requests that the United States Bureau of Mines, Department of the Interior, in cooperation with the United States Public Health Service, United States Department of Health, Education, and Welfare, initiate a prevalence study of pneumoconiosis among coal workers and allied occupations in the United States.

LETTERS FROM DRS. SCHWARTZ AND CERVIS

Senator HILL. Senator Hayden, chairman of this committee, has received a letter from Drs. J. Leon Schwartz and Ernest R. Cervis of Tampa, Fla., urging his support of the $3,700,000 approved by the House for the construction of a National Institute of Dental Research Building at the National Institutes of Health in Bethesda. This letter will become a part of the record at this point.

(The letter referred to follows:)

TAMPA, FLA.

Senator CARL HAYDEN,
Committee on Appropriations,
United States Senate, Washington, D. C.

DEAR SIR: There are many wonderful benefits to be wrought through dental research that will benefit mankind. At present the physical facilities of the Dental Institute are extremely inadequate. Due to the serious shortage of space, the dental research program has been greatly hampered and several of the outstanding skilled research investigators have been lost because they were dissatisfied with the working conditions at the Dental Institute.

We trust you will consider favorably and support the American Dental Association recommendation that the $3,700,000 authorized for National Institute of Dental Research building be appropriated this year.

Kindest regards,

J. LEON SCHWARTZ, D. D. S.
ERNEST R. CERVIS, D. D. S.

LETTER FROM SENATOR PASTORE

Senator HILL. Senator Pastore, a member of this committee, has received a letter from the New York Tuberculosis Association requesting his support of an appropriation of $7 million for the tuberculosis program of the Public Health Service for fiscal year 1959, the same amount as was appropriated for the current year 1958. This letter will be included at this point in the record.

(The letter referred to follows:)

NEW YORK TUBERCULOSIS AND HEALTH ASSOCIATION, INC.,
New York, N. Y., May 8, 1958.

Senator JOHN O. PASTORE,
Senate Office Building,
Washington, D. C.

DEAR SIR: The tuberculosis program of the Public Health Service, Department of Health, Education, and Welfare, requires continued support if the disease is to be eliminated as a major health problem.

The identification of persons with undiagnosed tuberculosis and expanded research on new methods of prevention will both be reduced if the 1959 budget proposal of $5,386,000 remains.

We request your consideration of the urgent need to continue the 1958 appropriation of $7 million for this work for another year.

Sincerely yours,

IRVING MUSHLIN, *Associate Director.*

LETTER FROM REPRESENTATIVE GUBSER

Senator HILL. Hon. Charles S. Gubser, Member of Congress from the 10th District of California, has addressed a letter to Senator Hayden, chairman of this committee, urging this committee to approve the full authorization of $210 million for the Hill-Burton program, and also outlining the need for hospital construction in his district. Congressman Gubser's letter will become a part of the record at this point.

(The letter referred to follows:)

CONGRESS OF THE UNITED STATES,
HOUSE OF REPRESENTATIVES,
Washington, D. C., May 7, 1958.

Hon. CARL HAYDEN,
Chairman, Senate Appropriations Committee,
Senate Office Building, Washington, D. C.

DEAR SENATOR HAYDEN: This letter is written for the purpose of urging your Committee on Appropriations to increase the amount provided for Hill-Burton hospital funds in the House-passed health, education and welfare appropriation bill to a figure at least as high as $210 million.

I represent one of the fastest growing areas in the Nation. In the vicinity of San Jose and Los Gatos every hospital corridor is filled with beds, and attendants are doing a magnificent job under the toughest of circumstances. Nevertheless, there are hundreds of patients in need of hospital care whose lives are endangered when a bed is not available to them.

The San Jose-Los Gatos area is, I am informed, ninth on the State of California's priority list. Unless at least $210 million is appropriated for Hill-Burton funds, it is extremely unlikely that California's share of $4 million will allow the San Jose-Los Gatos area to be reached on the priority list. I, therefore, am most anxious to see the amount increased.

In my opinion hospital construction is not a useless "leaf-raking" project by the Federal Government. It is money well spent for something we need now and will have to spend anyway. Furthermore, with the recession on our hands, we should increase appropriations for worthwhile projects which can be built in a hurry, thereby creating new jobs.

Hospital planning is well along and an increase of this appropriation to $210 million will not only give us the beds we need but it will reduce unemployment immediately.

Your consideration of this request will be appreciated.

Thanking you, I am,

Yours sincerely,

CHARLES S. GUBSER.

LETTER FROM SENATOR HUMPHREY

Senator HILL. The Honorable Hubert Humphrey, Senator from Minnesota, has written me a fine letter expressing his views on various items in this bill and urging the committee to approve increases in a number of areas. Senator Humphrey's letter will be made a part of the record at this point.

(The letter referred to follows:)

UNITED STATES SENATE,
COMMITTEE ON FOREIGN RELATIONS,
May 15, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Departments of Labor, Health, Education and Welfare, and Related Agencies, Committee on Appropriations, United States Senate, Washington, D. C.

DEAR SENATOR: I understand that you are now bringing hearings to a close on the appropriation bill for the Departments of Labor, Health, Education and Welfare, and related agencies.

I know that, as in the past, the many vital programs of these Departments will receive the most serious consideration by your Appropriations Subcommittee.

Already I have coresponded with you about several items in this bill of special concern to me. Now I should like to summarize various items that have come to light through corespondence from my constituents and through my own study of the bill as it came from the House of Representatives.

I hope that my views will be of assistance to you in committee discussion before the bill is reported to the Senate.

The pattern that emerges, as I look over the budget figures, is one of pretty general retrenchment, or failure to advance in almost all of the vital areas of welfare activity. The justification for the present reduced requests is everywhere the same: The budget. Not that the need is less; quite the contrary—the need is more as everyone, including administration spokesmen, admits. But administration officials consistently explain: "Overall fiscal considerations dictate that choices must be made." The administration then proceeds to make choices against advancement of the people's welfare. There is nothing hidden about the general holdback attitude. Let me cite several instances of special concern to me.

Food and Drug Administration

The Food and Drug Administration has been held to the same level as last year. Recently the Administrator, appearing before the House subcommittee, reported that they feel lucky to do this well—only a fight by the Department with the Bureau of the Budget saved them from across-the-board reductions that were the administration's policy. But the result is that the planned development of the Food and Drug Administration has been arrested.

In 1955 a citizens advisory committee studied the Food and Drug Administration and made recommendations. The report, endorsed by the prominent professional and industrial associations with whom the agency deals, recommended a threefold to fourfold expansion of the Food and Drug Administration in a period of 5 to 10 years starting with 1957. The fantastic increase in the number of new drugs developed each year—all of which must be tested by FDA; the constantly increasing trend toward partly processed foods with increased possibility of spoilage and harmful additives; the increased responsibilities laid upon the Food and Drug Administration through new legislation dealing with harmful effects of pesticides—all these things required, if the public interest is to be safeguarded in the manner intended by Congress, a greatly expanded Food and Drug Administration. So an approximately 15 percent per year expansion was

initiated in the 1957 budget and continued in the 1958 budget. Now the administration proposes to bring this expansion to a halt. But we cannot afford to stand still. To give just one illustration of where we stand, let me cite the number of attorneys budgeted in the Food and Drug Division of the Office of the General Counsel of the parent HEW Department. These men are concerned with enforcement suits. In the 1959 budget there are 19 attorneys budgeted. This is the same number as last year. The figure looks good against the 11 budgeted for 1956. Yet the true picture can be seen when you see that in 1951, before budget cutting of regulatory agencies became so popular, there were 20 attorneys for this purpose. Eight years ago there were 20; there are 19 now, even after 2 years to build up, even with the increased workload. We should not allow this critical program to lag.

Public Health Service hospitals

Another place where recommendations by private groups have largely been ignored is our Public Health Service hospitals. In October 1956, 5 private-survey teams surveyed Public Health Service hospitals.

Their findings are shocking. In those hospitals where patient care could be rated good, the survey teams agreed it was only because the medical-care programs were being carried on the backs of dedicated and overworked medical personnel, a situation destructive of morale. In other places, patient care was rated substandard, resulting from such elemental things as insufficient essential supplies like surgical instruments and even modern drugs. There was general agreement that deterioration of already inferior hospital care was inevitable unless budgets were increased. Much of the equipment in the Public Health Service hospitals is obsolete—the few items of good equipment they have are pieces that had been declared surplus by Veterans' Administration facilities. Whereas ordinary hospitals plan a 10 percent annual replacement of equipment, at the present rate replacement of equipment in Public Health Service hospitals will take 40 years.

In spite of these facts, no improvements are contemplated in the President's budget except at the leprosorium in Louisiana. What is the point, I ask, of conducting surveys such as these if we are going to refuse to take the action shown to be urgent to remedy the deficiencies?

Office of the Solicitor, Department of Labor

A serious difficulty is arising in the enforcement of the Fair Labor Standards Act by the Office of the Solicitor of the Department of Labor. The caseload is rising, and the probability is that this trend will continue. Wage determinations under the highway program, made by this office, are increasing because of the acceleration approved by the Congress. Further, field offices are reporting increased evidences of violation of the Labor Standards Act due to depression pressures. Yet no increase in staff has been allowed. Two years ago the Office of the Solicitor requested 6 new positions, but these were denied by Congress. This year the Office made a similar request, which was disallowed by the Bureau of the Budget. I think that serious consideration should be given to augmenting the staff of this important agency.

Venereal-disease control

The administration recommended a $15,000 cut in funds for clinical and laboratory research in control of venereal disease, despite evidence to show that the need is greater today than it was last year, and despite the request of the Public Health Service for an increase of about $1.5 million, most of which would have gone to the States.

Tuberculosis control

Funds for control of tuberculosis were reduced $1.6 million. Just when we seem at last to be within sight of total control of this one-time dreaded white plague, the administration proposes to slow down the effort to wipe it out.

On several items in the budget for the Department of Health, Education, and Welfare, I have already communicated with the committee. Let me reiterate these:

Library services

The House of Representatives raised the appropriation for rural library service from the $3 million the President recommended to $5 million, the same amount as last year. However, the States stand ready to use the full $7.5 million which

is authorized for this program. Now that we have stimulated interest and local participation in providing library services where there are none, we should grant Federal participation to the full extent envisioned when we passed the law.

Hospital construction

Inquiry by the House committee extracted from the administration a budget revision that brought the request for hospital construction grants under the Hill-Burton Act up to $121.2 million. However, this amount still will not be adequate. I believe that we should appropriate the full authorization of $150 million and $60 million respectively under the 2 parts of the program. The States are ready to proceed with building more hospitals and other medical facilities if we provide the initial funds. In Minnesota, for example, we are ready to go with 75 projects in the next fiscal year, with a total cost of $61 million, if about $25 million in Federal funds becomes available. Over the whole Nation, according to a Public Health Service survey, 1,285 projects costing $1.3 billion could be initiated in the coming year if $500 million in Federal funds were available. When we talk about antirecession measures, here is a good one. There would be no lag before they are begun on these projects. They are ready to go.

Dental health building

I am pleased to see that the House appropriated $3.7 million to build the long-contemplated dental health research building at the National Institutes of Health, even though the administration wanted to put off starting it at least another year. I hope that we can get on with this needed project.

For the most part, the House of Representatives dealt favorably with budget requests for the Department of Health, Education, and Welfare. In many instances, they refused to acquiesce in administration plans to cut down on programs that are proving their worth. In other instances, such as on the requests for the several Institutes of Health, the other body saw fit to raise the estimates of the administration, in effect directing that greater effort should be put into these worthy projects. I hope that the Senate will retain these increases. However, there is urgent need on the part of institutions conducting the research projects for a greater allowance for overhead costs. My information is that 25 percent of the research grant would be a more realistic figure than the present 15 percent. The House committee did not want to go along with the administration's suggestions that research funds be cut back to provide more overhead allowance. I think this is sound reasoning. But we should appropriate more so that institutions do not have to spend out of their own funds to conduct Federal projects.

In a few instances, the House of Representatives cut funds where I do not believe there was evidence to justify such action:

Sanitary engineering

The House approved some $90,000 less than requested for sanitary engineering. This will mean a reduction in the water-pollution control activities of the Public Health Service. With our continued growth in population and urban concentration, the problem of water pollution becomes more acute. I sincerely hope that the Senate will see fit to restore these funds. In addition, I hope that the grants to the States for pollution control will be maintained on the basis of $50 million.

Public health assistance to the States

The House of Representatives cut almost $900,000 from the administration's request for grants to the States for general improvement in health activities. The report of the House committee shows no justification for this cut. I do not believe we should reduce this appropriation below last years' level.

Research and training in social security

One area of particular concern to me is that of research and training in public welfare. We have recognized the value of research in many fields—medicine, agriculture, education. Yet we have up until the present not carried our general dedication to research into welfare fields.

In 1956 the Congress recognized the potential of research programs in this area and authorized $5 million a year. But not a penny has ever been appropriated. The Department of Health, Education, and Welfare did not even request an appropriation in this field, because of Budget Bureau restrictions. The

Department is, however, committed to research and ready to go ahead on a cooperative research program.

In addition, welfare programs have been handicapped by a lack of qualified personnel. In 1956 we also authorized a $5 million training program, to be matched 20 percent by the State. This sum was requested in 1958, but since Congress did not grant it, the request was not repeated this year.

I think it is high time we began this long-delayed research program. It is foolish to go blindly ahead with our welfare programs without the benefit of facts, new understandings, and new methods which a research program could develop. I hope that we will appropriate the full authorization for these programs this year.

Employment security and public assistance

Finally, there is another aspect of the administration's budget figures for the Departments of Labor and Health, Education, and Welfare, that will require thoughtful appraisal. All of the estimates for the Bureau of Employment Security and Bureau of Public Assistance were made under the assumption that there would be about 2 million insured unemployed during the coming fiscal year. The best present estimate of this figure we have is 3,600,000. It is obvious that the amount of money in the budget will not handle the requirements in this field, except in the unlikely prospect that President Eisenhower's predictions of an early end to the present recession without action by the Government begin to come true. Now, in fairness, it must be admitted budget procedures being what they are—that the bureaus concerned made their original estimates before economic conditions had reached their present sad state. Yet, despite repeated requests by the House subcommittee, no updating of the estimates were made by the Department. The House subcommittee finally threw up its hands in despair, and processed the estimates on the basis of 2 million insured unemployed. The Departments apparently now intend to proceed by the submission of supplemental appropriation requests. The least result of this method of operation is to make misleadingly low the budget for the next fiscal year.

Payments to school districts

Another instance of what will turn out to be a misleading budget estimate is the item for payments to federally impacted school districts under Public Laws 815 and 874. The administration recommended no appropriation whatsoever for these programs for fiscal 1959. Their reason was that they submitted a legislative request to eliminate most of the Federal responsibility in this area. The administration did, however, propose a gentle letdown over a 4-year period. Where they expected to get the funds for this, I cannot understand. But the House of Representatives has already passed an extension of construction and operation payments to districts who have experienced a rise in enrollments because of Federal activity and where the tax base of the district has been reduced because parents of pupils live or work on Federal property. While the Senate has not acted on this measure as yet, I assume and hope that the extension will receive favorable action here. We then must expect a supplemental appropriation for this purpose.

In these brief paragraphs I have tried to demonstrate my concern with the attempt by the administration to cut back on some of the most valuable activities the Federal Government engages in. I am sure that other witnesses before your subcommittee have brought out facts to document the needs in various areas. I wanted only to underline a few of these.

I have one further comment and that relates to the Office of Vocational Rehabilitation.

Office of Vocational Rehabilitation

The appropriation of $3.6 million by the House of Representatives for research and demonstration grants in the Office of Vocational Rehabilitation will provide for only about 18 new projects. It will take $3.2 million merely to continue the projects presently authorized. I would think that about $5 million for this purpose would provide much more adequate services in this field.

I am confident that the committee will recommend a good bill.

Best wishes.

Sincerely,

HUBERT H. HUMPHREY.

LETTER FROM MR. DONALD H. DUNHAM

Senator HILL. I have received a letter from Mr. Donald H. Dunham, department director, retirement, safety, and insurance department, National Rural Electric Cooperative Association, in support of funds for vocational education. Mr. Dunham's letter, with enclosures, will become a part of the record at this point.

(The letter referred to follows:)

RETIREMENT, SAFETY, AND INSURANCE DEPARTMENT,
NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION,
Washington, D. C., May 7, 1958.

Hon. LISTER HILL,
Chairman, Department of Labor, Health, Education, and Welfare Subcommittee, Senate Committee on Appropriations, Washington, D. C.

DEAR SENATOR HILL: We appreciate receiving notice from Mr. Herman E. Downey, clerk of your subcommittee, regarding your hearing on Monday, May 12. We wish to indicate our support of certain appropriation items in H. R. 11645, having to do with the George-Barden Act program for the fiscal year ending June 30, 1959. My schedule is such, however, that I regret that I will be unable to appear before your subcommittee on May 12. Therefore, I would like to ask that you enter this letter and the enclosed resolutions in the record of your hearings.

As you know, the National Rural Electric Cooperative Association represents nearly all of the rural electric cooperatives and power districts which are a part of the REA program, operating in the United States and Alaska. As a member of the association staff, I am department director of the retirement, safety, and insurance department. It is the responsibility of my department to coordinate the on-the-job training and vocational training of our rural electric cooperatives.

It has been our experience in this program that job training and safety training depends in large measure upon sound educational practices. The training of rural electrification workers in new techniques and safety practices through these programs is paying off, not only in saving the lives of workers but also in dollars and cents.

The funds appropriated by Congress each year as found in H. R. 11645 make it possible for the rural electric cooperatives to benefit by on-the-job training and safety programs. The on-the-job training is handled by the cooperatives on a local level in cooperation with the various State education offices involved. In most cases these funds are used on a matching basis, i. e., the rural electric system involved pays its part of the funds matching the Federal and State funds.

The records, to date, indicate that these programs have been very effective from the standpoint of the general welfare as well as from the standpoint of the REA program. The continued success of this job training and safety training program is dependent upon adequate Federal vocational appropriations to the States to stimulate and assist them in conducting these programs.

It is for this reason that the association, speaking for its more than 900 members throughout the United States, strongly recommends approval of the full amounts for the fiscal year of 1959.

The official position of the association is set forth in a resolution which was approved at the annual meeting of the National Rural Electric Cooperative Association in Dallas, Tex., February 3–6, 1958. A copy is attached herewith for the record.

Last fall at 10 regional meetings rural electric systems throughout the Nation approved resolutions in support of these programs. Many State associations likewise have indicated their support. A copy of the resolution passed by the Association of Illinois Cooperatives is also attached herewith.

Very sincerely yours,

DONALD H. DUNHAM, *Department Director.*

Enclosures.

RESOLUTION ADOPTED AT THE 16TH ANNUAL MEETING OF THE NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION, DALLAS, TEX., FEBRUARY 3–6, 1958

Whereas the vocational programs have effectively utilized the programs of vocational education; and

Whereas the continued success of these programs is dependent upon the further expansion of vocational education to meet the expanding needs for training programs; and

Whereas the training instructional staff in many States needs to be further expanded to meet the present needs for training; and

Whereas our job training and safety training programs are dependent upon stimulation given to vocational education through Federal appropriations; and

Whereas the Joint Federal-State Action Committee has recommended that Federal appropriations for vocational education programs in agriculture (FFA), home nursing service, home economics, trades and industries, and the distributive occupations, including rural electric systems, be eliminated: Now, therefore, be it

Resolved, That we express to Congress our appreciation for appropriating the full amount authorized for vocational education for fiscal 1958; and be it further

Resolved, That we request Congress to appropriate for fiscal 1959 the full amount authorized for vocational education under existing laws; and be it further

Resolved, That we request Congress not to repeal the existing laws for vocational education; and be it further

Resolved, That we request Congress to enact into law legislation that will authorize appropriations to further expand vocational education to meet the needs of national defense and the economy of our Nation.

RESOLUTION ADOPTED BY THE ILLINOIS JOB TRAINING AND SAFETY COMMITTEE AND FULLY ENDORSED BY THE BOARD OF DIRECTORS OF THE ASSOCIATION OF ILLINOIS ELECTRIC COOPERATIVES

Whereas this Nation is engaged in an economic struggle, the outcome of which is dependent in a large measure on the productive capacity of its people; and

Whereas the productive capacity of the people of this Nation must be maintained and increased through every means; one of which involves the maintenance and expansion of vocational education in the public schools; and

Whereas the budget message to Congress on January 13, 1958, recommended that Federal funds for vocational education be eliminated beginning with fiscal 1960; and

Whereas if this recommendation is followed by the Congress, it would eliminate the Federal-State-local arrangements for providing a vocational education program that has been developed in this country since 1918 to a point where it is indispensable to this Nation in meeting the manpower needs to win the economic struggle in which we are now engaged: Therefore be it

Resolved, That the job training and safety committee of the Association of Illinois Electric Cooperatives request Congress to appropriate for fiscal 1959 the full amounts authorized for vocational education under existing laws; and be it further

Resolved, That we request Congress not to repeal the existing laws for vocational education; and be it further

Resolved, That we request Congress to enact into law legislation that will authorize appropriations that will further expand vocational education to meet the needs of national defense and the economy of our Nation; and be it further

Resolved, That this committee recommend to the board of directors of the State Association of Illinois Electric Cooperatives to take similar action and to forward this resolution to the Illinois Member of Congress; and be it further

Resolved, That the Association of Illinois Electric Cooperatives approves and endorses the recommendations of the Illinois Job Training and Safety Committee regarding the resolution contained in these minutes.

LETTER FROM FEDERAL STATISTICS USERS' CONFERENCE

Senator HILL. The committee is in receipt of a letter from the Federal Statistics Users' Conference, Washington, D. C., expressing their support of two programs of the Department of Labor, funds for improvement of which were not allowed by the House; namely, the statistics on employment and hours of work, and productivity statistics. This letter will be included at this point in the record.

(The letter referred to follows:)

FEDERAL STATISTICS USERS' CONFERENCE,
Washington, D. C., May 20, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Appropriations for the Labor Department,
Senate Office Building, Washington, D. C.

DEAR SENATOR HILL: The Federal Statistics Users' Conference is vitally interested in the statistical programs of the Bureau of Labor Statistics. The conference consists of one-hundred-and-twenty-odd business, farm, labor, and nonprofit research organizations who use Federal statistical programs and are interested in developing programs of optimum usefulness at minimum cost. A list of the trustees and members is attached.

The statistical programs of the Bureau of Labor Statistics are of great importance to nongovernmental users because the vital information they supply is broadly used in making current and long-range decisions. A number of improvements in these programs were recommended in the President's budget.

Two of the important improvements recommended in the budget were not acted on favorably in the House of Representatives.

The first of these was a proposal to improve our statistics on employment and hours of work which have not kept pace with changes in our dynamic economy.

Paid vacations, sick leave, and the like are common features of our economic life today. Yet our detailed statistical information tells us only about "hours paid for" not "hours worked." Moreover, our present statistics relate primarily to manufacturing industries and to production workers only.

Coverage of nonmanufacturing industries is limited and information relating to the employment and hours of work of a significant portion of our working population—technicians, engineers, scientists, executives, and other white-collar workers is completely lacking.

We need to improve our statistics on employment and hours of work in order to have a complete picture of the relation of employment to earnings and output.

This improvement is of immediate interest because it will give broader significance to our statistics on the average workweek by including information on groups not now reported on. The average workweek is widely used by business, farm, labor, and research organizations as a sensitive indicator of our current economic health.

The House of Representatives likewise failed to act affirmatively on a proposal to improve our productivity statistics.

The measurement of productivity is one of the most difficult of our statistical problems. At the same time it is one of the most important because the measurement of output per man-hour of work is an indicator of our efficiency. A great deal of work needs to be done in this field in order to develop meaningful and generally accepted statistics on productivity. The proposed improvement in 1959 which would produce productivity indexes for major industry groups is a step in the right direction.

These improvements in the statistics programs of the Bureau of Labor Statistics, like the improvement in our wholesale and retail price indexes already in the bill before you, will make significant contributions toward giving business, farm, labor, and nonprofit research organizations better information for decision-making and better tools for economic analysis. We hope that you and your subcommittee will give them your earnest consideration in your deliberations on the Department of Labor appropriation bill.

Sincerely yours,

ROYE L. LOWRY, *Executive Secretary.*

LETTER FROM TEXTILE WORKERS' UNION OF AMERICA

Senator HILL. The committee is in receipt of a letter from the Textile Workers' Union of America urging an increase in the staff of the National Labor Relations Board. The letter will be inserted at this point in the record.

(The letter referred to follows:)

TEXTILE WORKERS' UNION OF AMERICA,
Washington, D. C., April 28, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on Appropriations for the Departments of Labor, Health, Education, and Welfare, and Related Agencies, Senate Committee on Appropriations, Senate Office Building, Washington, D. C.

DEAR MR. SENATOR: On behalf of the Textile Workers' Union of America, AFL–CIO, I wish to request and urge that the subcommittee of the Appropriations Committee over which you preside give very serious thought to the matter of delays in processing cases which have been submitted to the National Labor Relations Board. You are well aware of the greatly increased caseload now being handled by the Board. It is painfully evident to those unions which have many matters pending before the Board that unless this Agency quickly takes on added staff the delays in duration which have been constantly growing will become more serious.

You are aware, Mr. Senator, of the fact that the Textile Workers' Union of America holds pronounced views as to the present policies of the National Labor Relations Board. We have strongly criticized what we believe to be the shift in position which has been evident in Board decisions and procedures.

The Textile Workers' Union of America has repeatedly urged that the appropriate committees of the Congress conduct hearings on these policy issues; we assume, however, that the Appropriations Committee would be more concerned with efficiency with which the Board functions rather than the character of its decisions and procedures.

In this communication we wish to stress that it is our experience that the average elapsed time it takes to process any matter before the Board is increasing and that this delay in itself, no matter what the outcome of any case may be, prevents justice from being done in far too many instances. Workers almost universally tend to lose faith in the integrity of the National Labor Relations Board when a case drags on for month after month.

In a staff report on this very subject issued in 1952 by the Subcommittee on Labor and Labor-Management Relations of the Senate Committee on Labor and Public Welfare, appointed by the 82d Congress, the following sentence appears on page 5:

"* * * to a larger degree than in other branches of litigation * * * administrative delay weakens the force of public policy, at the same time that substantial harm is done to those who rely on the Board to protect the rights guaranteed to them under the law. This is particularly true in the labor-management field, because there is no money equivalent which can be imputed as the result of the failure of the law to operate speedily."

As far as we know, there has been no recent study issued by the NLRB on the average time that elapses in processing the different types of cases which come before the Board. In the 1952 report a statistical analysis is printed on page 3 which gives average figures applying to the years of 1951 and 1952. Those figures showed that in January 1952 the median average elapsed time required to process an unfair labor practice charge was 489 days. As to representation case which was filed in October 1957—the election will not be held process a case, but that this figure dropped to 71 days by May of that same year. On the basis of the experience of the Textile Workers' Union of America in the years since 1952, it is our belief that these average figures will show a much worse trend if your subcommittee would require the NLRB to give corresponding figures for the past couple of years.

In the case of Jefferson Mills, Pulaski, Va. (Case No. 5–RC–2358)—a representation case which was filed in October 1957—the election will not be held until May 1—a period of over 6 months. The Board argues that there were special difficulties in this particular case. Actually, this was simply a routine situation in which the employer lawyer, following customary (and almost invariable) delaying tactics, raised the issue that the firm was not engaged in interstate commerce. Energetic and alert Board personnel could have disposed of this tongue-in-cheek argument without the slightest violation of the due process in a matter of a few days. But it has taken 6 months.

Fact is that no representation case should take more than 30 days from filing until the direction of election, and the Congress should require the Board to meet such a schedule. The Congress should, of course, supply the Agency with whatever is necessary in the way of funds to fulfill such a directive.

Officers of the Textile Workers Union of America, AFL–CIO, have said in recent years that the National Labor Relations Board does not issue decisions—it makes postmortems. Moreover, we have fully documented this sweeping and bitter accusation. Investigation would show that only too frequently unions seeking elections in nonunion plants encounter procedural delays which enable management to bring in almost a complete new work force before the actual election is held. From the standpoint of the group that petitioned for the election, a direction of election issued after they are no longer employed is a postmortem. TWUA has cited case after case where Board decisions (plus court appeals in some instances) have taken as long as 9 years.

It is clear that the NLRB is understaffed. With some notable exceptions the average NLRB official is hard working and sincere. In any event, it would be impossible to know whether the delays that are now so seriously undermining the effectiveness of the agency are due in any way to policy or prejudice unless and until the Board has been adequately staffed to do a reasonably fast job.

This whole problem of the functioning of the Board is one that should be carefully studied over a period of time. However, there can be no doubt whatsoever, it seems to us, that the imperative need of the moment is to give the Board whatever funds it may require to eliminate the present shocking backlog of cases so that in the future the agency can provide the kind of service that is absolutely necessary to effectuate the purposes of the statute which it is set up to administer.

Very truly yours,

JOHN W. EDELMAN,
Washington Representative.

LETTER FROM MRS. HELEN M. HARRIS

Senator HILL. The committee has received a letter from Mrs. Helen M. Harris of the Gold Star Sons and Daughters of the United States, accompanied by a request from Senator Robertson of Virginia that it be printed. The enclosures submitted by Mrs. Harris will be maintained in the files of the committee.

(The letter referred to follows:)

GOLD STAR SONS AND DAUGHTERS OF THE UNITED STATES,
Washington, D. C., May 1958.

Hon. CARL HAYDEN,
Chairman, Appropriations Committee, the Honorable Chairman, Subcommittee on Appropriations.

DEAR SENATOR: I, a victim of cancer having a vested interest in any effort to find a cure for cancer, request that the United States Senate save the taxpayers the $57 million appropriations of the National Cancer Institute by abolishing it, as it now stands, because of its relations to commercial interest it appears more obstructive than helpful in the search for a successful cancer cure. In the past years it has received nearly a billion dollars for which nothing has been shown. Cancer deaths have increased from 4.7 in 1947 to 15.7 in 1955. Dr. Heller refuses to send down a competent medical and scientific staff to evaluate chemotherapys that have met the criteria laid down for them and have patients alive 5 years or more, yet they do not hesitate to give out information to the public, to whom the truth on these chemotherapys could well mean life not death, that they are "an unorthodox treatment, that as yet have not proven of any worth." How can they tell what it can or cannot do until an honest evaluation is made? What is the doomed cancer victim's family to do when they state that only surgery and X-ray cures cancer, and their loved ones having one or the other or both is sent home as hopeless to die—they are brainwashed by the constant biased propaganda "Quacks Peddling Cancer Cures," one-sided misinformation, and then on top of that the AMA controls the doctors so that most of them are afraid to get these chemotherapys for the dying victim and stand by and watch the slow torturous death of the cancer victim and the tremendous financial burden of the family.

We hope that Congress will take immediate steps to set up a commission of top medical and scientific cancer experts, who will be answerable to Congress and who will undertake an immediate honest evaluation of so many promising cancer chemotherapys of the independent cancer researchers and that the public will get an honest report of their findings so that the cancer victims constitutional rights to know about these chemotherapys and the freedom to use them will be preserved. Why spend billions looking for a cure for cancer until the cancer conspiracy is thoroughly investigated and congressional action taken to see if Health, Education, and Welfare, National Cancer Institute, Food and Drug, Surgeon General, and Public Health are operating as set up by law or the monopolistic interest of the minority groups and not for the best interest of the health and welfare of the American people. Why was Federal Security Administration changed into Health, Education, and Welfare? Who was behind this change?

The following facts and documents are submitted to prove our points:

"Dr. Henry Wachtel, formerly head of the Fordham University Cancer Research Department states that to meet your requirement a test of his treatment would cost $500,000 which practically no scientist could be expected to possess.

Do you consider this fair because the same requirements are made of the large pharmaceutical manufacturers who have hundreds of millions at their disposal? The American public, which donates millions of dollars each year to your organization is only interested in securing a successful treatment for cancer as quickly as possible. Should it not be the function of your organization to explore every possible treatment and make available a fair and controlled test at a cost within the means of the applicant or even free if necessary?" Page 6 of the Independent—from the article, A Visit to the American Cancer Society, by David Kasson, hopeless cancer victim and president of Freedom for Cancer Research Committee, from another article, same paper, by David Kasson, "Milton Rubin, noted New York City public relations expert on cancer, had lunch with me recently," he remarked, "The cancer specialists who make $150,000 to $250,000 a year don't want a cancer cure to come too quickly. The impact on their pocketbooks would be too sudden."

From the Book K—Krebiozen Key to Cancer by Herbert Bailey—this is the facts on Dr. Andrew C. Ivy, M. D., Ph. D., the world-famed scientist and cancer expert. Page 93, chapter 19, The Loretanie Episode, Senor Loretani added that since the American Medical Association governed practically all medical matters in the United States naturally anyone who controlled the AMA itself would be able to command anything he wanted. He even went so far as to name this omnipotent official, one Dr. J. J. Moore, treasurer and member of the board of trustees of the AMA. He said Dr. Moore was working in collaboration with his good friends Moore and Brainard and they would ruin Krebiozen and Dr. Ivy. The Durovics would then have no other choice but to sell out cheaply. For proof of his group's ability to produce their desired ends Loretani asserted that there was a friend of Ed Moore on the medical faculty at the University of Illinois. This friend even then was preparing an unfavorable report on Krebiozen and it would be published in the AMA Journal, etc. Had Dr. Ivy pressured the Durovics to sell the rights to Krebiozen to the drug trust wouldn't the world have then known about a wonderful cure for cancer? Dr. Steven Durovic has spent $1,300,000 of his own money to develop Krebiozen. All he wanted was a fair and controlled test and that the American Medical Society withdraw its false report on Krebiozen. Doesn't this prove that until the drug trust and medical monopolistic interest can find a cancer drug that they can own and control and make billions of profits, no chemotherapy no matter how promising has a chance to get an honest medical and scientific evaluation and be made known to all the people.

Is Dr. Heller's present policy to ask these independent cancer researchers to submit their files of cases and then he states that facts do not warrant any further investigation and Food and Drug Administration is given the go-ahead to start a court action on the flimsiest charges, labeling them "quacks" and endless harassment follows?

In 1953 the late Senator Tobey started an investigation into the suppression of cancer drugs and research. Three days after the first report of his chief counsel, Mr. Benedict F. FitzGerald, borrowed from the FBI, Senator Tobey died and powerful forces brought this important investigation to a halt. The Congressional Record dated August 3, 1953, pages A–5350 through A–5353, bound volume, Library of Congress, has this famous FitzGerald report. Herewith is

a reprint of it by the Defenders, attached to our prepared statement, but I do want to point these paragraphs out on page 4:

"The controversy is involved and requires further research and development. There is reason to believe that the AMA has been hasty, capricious, arbitrary, and outright dishonest and, of course, if the doctrine of respondeat superior is to be observed the alleged machinations of Dr. J. J. Moore (for the past 10 years the treasurer of the AMA) could involve the AMA and others in an interstate conspiracy of alarming proportions."

Page 7: "If radium, X-ray, or surgery, or either of them, is the complete answer, then the greatest hoax of the age is being perpetrated upon the people by the continued appeals for funds for further research. If neither X-ray, radium, or surgery is the complete answer to this dreaded disease—and I submit that it is not—then what is the plain duty of society? Should we stand still? Should we sit idly by and count the number of physicians, surgeons, and cancerologists who are not only divided but who, because of fear or favor, are forced to line up with the so-called accepted view of the American Medical Association, or should this committee make a full-scale investigation of the organized effort to hinder, suppress, and restrict the free flow of drugs which allegedly have proven successful in cases where clinical records, case history, pathological reports, and X-ray photographic proof, together with the alleged cured patients, are available? Accordingly, we should determine whether existing agencies, both public and private, are engaged and have pursued a policy of harassment, ridicule, slander, and libelous attacks on others sincerely engaged in stamping out this curse of mankind. Have medical associations, through their officers, agents, servants, and employees, engaged in this practice? My investigation to date should convince this committee that a conspiracy does exist to stop the free flow and use of drugs in interstate commerce which allegedly have solid therapeutic value. Public and private funds have been thrown around like confetti at a country fair to close up and destroy clinics, hospitals, and scientific research laboratories which do not conform to the viewpoint of medical associations. How long will the American people take this? To illustrate the stranglehold of the American Medical Association on legislation, which in turn affects every household in America, let us look at a small 25-cent tube of penicillin ointment. Is it dangerous to have around the house for a cut or a small bruise on your body? Rat poison can be bought without a doctor's prescription. The sale of arsenic must have a doctor's prescription. The sale of arsenic and rat poisons is small, but not penicillin. Accordingly we must have a doctor's prescription in America to buy a 25-cent tube of ointment. In Canada, however, the medical association has not yet discovered the great danger of a small tube of penicillin ointment and, accordingly, the people are able to buy it without paying a doctor for a prescription. To say that it is dangerous is silly. To assert, rather, that it is but another manifestation of power and privilege of a few at the expense of the many would be more consistent with the truth and wholly accurate," etc.

Food additives are known to cause cancer, symposium of top experts from the world meeting in Rome stated. Why doesen't Food and Drug take action on this? Why was the paper of Dr. Huerper, a member of the staff of National Cancer Institute, suppressed on cancer hazards in consumer goods?

The Independent, December 1957, Drug Monopoly and the Government, by David Kasson: "Here for the attention of United States Congress is circumstantial evidence of collusion between the below-described United States medical departments and the drug monopoly and here is a plan which could be a factor in saving the taxpayers' money: Item, Food and Drug Administration appropriation, approximately $9,300,000. * * *"

He recommends that anyone interested read the History of a Crime Against the Pure Food Law, by the late distinguished Dr. Harvey W. Wiley, formerly head of United States Food and Drug Administration. Dr. Wiley's report of 1930 tells how his own efforts to honestly administer the 1906 Federal pure-food law were completely nullified by food racketeers. He was forced to resign after being stripped of all power to enforce the law. Dr. Wiley was regarded as a man of the highest integrity and capability and one of the finest public servants in American history.

"As evidence of collusion with the drug monopoly by the present administration its blocking of a license for the distribution of Krebiozen, a successful cancer treatment, seems convincing. This nontoxic treatment sponsored by one of the

world's greatest authorities, Dr. Andrew C. Ivy, of the University of Illinois, has been so brazenly blocked that a senatorial investigation is imperative. In a recent trial, the Food and Drug Administration appeared against a producer of a treatment for cancer on the basis of the flimsiest of legal technicalities. The department's attorney at this trial in Pennsylvania arrogantly stated to the presiding judge, Hon. Wallace S. Gurley: 'Your Honor, we shall do everything and anything to get this group out of our hair because we have the time and we have the money.' He meant the taxpayers' money, of course, which is indicative of just how the taxpayers' money is regarded by some bureaucratic functionaries. Incidentally, the American Medical Association has spent millions of dollars to put this same company out of business, though at the same time it refuses to spend 1 penny to give a fair controlled test. It has been requested to do so many times." (Ten doctors who went down to Hoxsey Clinic and studied their chemotherapy, case histories, and patients have stated that Hoxsey does cure cancer.)

"Public Health Service appropriation, $28 million. In my opinion, circumstantial evidence of this department's collusion with the drug-medical conspiracy is so evident that only a major shakeup will ever make it an effective servant of the public again. The main function of the Public Health Service seems to be as a glorified sales department of the drug monopoly, with Dr. Leroy E. Burney, United States Surgeon General, its sales manager. * * * All of these organizations have, I believe, perverted the original intent of Congress when they were formed. I now feel that they are contributing to a moral corruption which reaches so deeply into the warp and woof of our entire social and economic system as to threaten democracy and capitalism itself."

The American Cancer Society is violating their tax exemption by trying to get legislation through the Weinberger bill in California that will take away the cancer victim's constitutional rights to be treated by any method of his choice except surgery, X-ray, and radium.

"The American Cancer Society collected from 1944 to 1950 the staggering amount of $89,663,938 and spent on research the small amount of $16,714,192, thus unable to account for the remaining amount in round figures of $73 million that they collected from the American public but failed to spend on cancer research. Most of this money has been paid out in exorbitant salaries to men who are heading the American Cancer Societies. Men such as Dr. Charles Cameron, the executive director of this fund-raising group, is reported to receive one of the greatest salaries paid any person in America" (from June 1957 Globe Gazette). What would be an honest survey of the big years 1950 through 1958 show? Isn't legislation needed to stop exploiting of the sick?

Attached herewith is a pamphlet entitled "Hope," the antibiotic approach in the treatment of cancer—mucorhicin therapy. In it is a letter dated July 9, 1956, from Dr. Joseph W. Wilson, medical supervisor of the Drosnes-Lxenby Clinic to Dr. J. R. Heller, Director of the National Cancer Institute at Bethesda, Md., respectfully requesting the National Cancer Institute to officially investigate the results obtained with the cancer therapy mucorhicin. To date this request has not been granted. They had to meet the criteria laid down for them in 1949 by Dr. Spencer. Mucorhicin was analyzed by Dr. C. W. Emmons, principal mycologist, Federal Security Agency. Instead in December 1956, Dr. Heller changes the criteria that will make it impossible to have any independent cancer researcher chemotherapy evaluated. I appealed to Mr. Folsom to take action. Instead, I get a letter from Food and Drug informing me that they are taking the liberty of sending someone down to get my medical record. Registered letter to Mr. Folsom relative to all the cancer facts dated March 3, 1957, is still unanswered. Food and Drug gave out information that all who took mucorhicin have died. Yet to me and to many a doomed cancer victim it has given us years of living with health and strength returned.

Millions of cancer victims have died needlessly because the truth on these chemotherapies was withheld and no action taken to evaluate them. Millions more will die needlessly unless Congress acts at once.

Respectfully submitted.

Mrs. Helen M. Harris,
Cancer Victim and Trustee.

LETTER FROM THE CHAMBER OF COMMERCE OF THE UNITED STATES

Senator HILL. The Chamber of Commerce of the United States has addressed a letter to this committee recommending reduction in, and in some cases complete elimination of, certain items in this bill for the Department of Health, Education, and Welfare, the Department of Labor, and the National Labor Relations Board. The chamber's letter will be included at this point in the record.

(The letter referred to follows:)

CHAMBER OF COMMERCE OF THE UNITED STATES,
Washington, D. C., May 19, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on the Departments of Labor and Health, Education, and Welfare and Related Agencies, Senate Appropriations Committee, Washington, D. C.

DEAR SENATOR HILL: The Chamber of Commerce of the United States believes that the proposed 1959 budget should be reduced wherever possible without impairing national security or other vital Government activities. Such reductions would permit the long-overdue revision of the tax structure which has operated to discourage initiative and risk-taking in the economy.

The recommendations which follow are based on a comprehensive analysis of the President's budget for 1959 conditioned by the paramount need for restraint in those areas which do not meet the standards of first priority.

	Budget request	Chamber recommendation	House approved amount
Department of Health, Education, and Welfare:			
Public Health Service:			
Grants for waste treatment works construction	$45,000,000	0	$45,000,000
Sanitary engineering activities	12,815,000	$9,815,000	12,725,000
Grants for hospital construction	121,200,000	0	121,200,000
Office of the Secretary	5,374,000	5,102,000	5,304,000
Total	184,389,000	14,917,000	184,229,000
Department of Labor:			
Office of the Secretary	1,556,000	1,478,000	1,478,000
Bureau of Apprenticeship and Training	3,900,000	3,600,000	3,600,000
Office of the Solicitor	2,121,000	2,021,000	2,321,000
Bureau of Veterans Reemployment Rights	542,000	100,000	542,000
Wage and Hour Division	10,500,000	8,825,000	10,500,000
Total	18,619,000	16,024,000	18,441,000
National Labor Relations Board	9,985,000	9,384,800	9,384,800
Grand total	212,993,000	40,325,800	212,054,800

Justification for the above recommendations are discussed below:

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Public Health Service—Grants for waste-treatment-works construction

It is recommended that the request for $45 million for grants to municipalities for sewage-treatment works under Public Law 650 be denied. The basis for this recommendation is that stream-pollution control through sewage treatment is a local and State responsibility rather than a Federal obligation. Federal grants have the adverse effect of penalizing those communities which have already gone ahead with improvements on their own initiative. These facts were recognized by President Eisenhower in recommending early termination of the Federal-grants program, although he proposed to do this in 1960 rather than 1959. However, to deny additional appropriations at this time will not halt the program, because funds previously appropriated have not been fully allocated. Sufficient funds remain available to finance the grants program through fiscal 1959 and the first quarter of 1960. We therefore recommend no new appropriation, but continuation of grants at the requested level until the entire previous appropriation has been expended.

Public Health Service—Sanitary-engineering activities

It is also recommended that the $3 million requested for grants to States and interstate agencies for water-pollution control and water-supply activities be denied. The $3 million is included under Public Health Service requests for sanitary-engineering activities. When deleted from that item, $3.6 million will remain for PHS water supply and pollution control, as authorized under the Water Pollution Control Act of 1956. In this case the States themselves either individually or through interstate compacts should assume full responsibility for pollution-control programs.

Public Health Service—Grants for hospital construction

Local hospital facilities are no more an obligation of the Federal Government than the building of city halls, streets, schools, and other local institutions and facilities. The current law, authorizing this program, expires June 30, 1959, and it seems unwise to continue the authorization to incur obligations under it. It is, therefore, recommended that the entire item of $121,200,000 proposed for the fiscal year 1959 be eliminated from the budget.

Office of the Secretary

The chamber recommends that the appropriation items covered under the Office of the Secretary be retained at the current year's appropriation level of $5,102,000. This would effect savings in new authorizations of $272,000. This organization is an overhead activity of the Department whose costs have been rising at a rapid rate in the past several years.

It is noted that the proposed increase of $272,000 is not in reality the total increase proposed for this organization in the Department of Health, Education, and Welfare during the coming year. If the pay increases advanced by the President are added to this (and current indications are that these are low), it is estimated that the total increase for the Office of the Secretary will be over $600,000, or about 12 percent more than the current year.

Considering the demand for increased funds in defense programs and allied functions, every effort should be made to curtail such support and overhead-type Government costs. Increases proposed because of program changes or increased workload should be absorbed by reducing less essential activities within the Department.

DEPARTMENT OF LABOR

Office of the Secretary

From the budget with respect to the Office of the Secretary, a cut of $76,000 should be made, bringing this into conformity with last year's amount. An analysis of the reasons offered in support of this particular budget compels the conclusion that serious efforts at economy have not been made. Essential services can be continued while cutting the amount indicated.

Bureau of Apprenticeship and Training

The Bureau of Apprenticeship last year was refused an increase of $300,000. Since no significant change in the fact situation has been adduced, the amount should be denied this year as well. Your adoption of the House action on this request is strongly urged.

Office of the Solicitor

A total of $100,000 can be cut from the budget for the Office of the Solicitor. Events as reported in committee testimony have demonstrated that this budget was significantly overstated last year. The overstatement, together with savings from the elimination of unneeded or unnecessarily repeated services, is the basis for the recommended saving here.

Bureau of Veterans Reemployment Rights

The Bureau of Veterans Reemployment was begun as a temporary agency and has now largely outlived its usefulness. A saving is possible here of $442,000, leaving to it a total of $100,000 with which to wind up its affairs.

Wage and Hour Division

The Wage and Hour Division's compliance and enforcement section has reached a longevity such that it should be able to make its work more efficient and thus reduce its cost of operation. Instead, it seeks a big increase over the 1956 level. The required tasks of the Division can and should be conducted with a budget which will nevertheless prompt a gradual elimination of needless activities. The budget of this Division should be cut by $1,675,000.

NATIONAL LABOR RELATIONS BOARD

The House action reducing the 1959 request is to be commended. The reduction of $600,200 from the amount requested should encourage greater efficiency in the operations of the Board. We urge that you concur in the House action which denies an increase in funds over the current year's level.

I would appreciate it if you would make this letter a part of the record of hearings on the appropriation bill for the Departments of Labor and Health, Education, and Welfare.

Cordially yours,

CLARENCE R. MILES,
Manager, Legislative Department.

Senator HILL. I have received a letter from the chairman of the Papago Tribal Council, Sells, Ariz., urging the allowance of $45 million for Indian health activities. Mr. Manuel's letter will be placed in the record.

(The letter referred to follows:)

LETTER FROM PAPAGO TRIBAL COUNCIL, SELLS, ARIZ.

THE PAPAGO TRIBE,
THE PAPAGO COUNCIL
Sells, Ariz., May 22, 1958.

Hon. LISTER HILL,
Chairman, Subcommittee on HEW Appropriations,
U. S. Senate, Washington, D. C.

DEAR SENATOR HILL: As a representative of the Papago Tribal Council I am writing to ask that the appropriation for the Division of Indian Health be increased by $5 million, so that it will be brought back to the amount originally requested by the Division.

I believe that health conditions in many reservations are similar to those of the Papagos. General health services are still generally inadequate, and in our case we need a hospital badly, and although the architectural and engineering work have started on it, we understand that there are no funds available for the actual construction.

I am sure the Public Health Service is trying to make its money go further by making all its operations more efficient but I also think the House cut should be restored if it is going to make progress in giving the Indians the health services they are entitled to.

Sincerely yours,

MARK MANUEL, *Chairman.*

CONCLUSION OF HEARINGS

Senator HILL. This closes the hearings and the committee will stand adjourned.

(Thereupon, at 12:30 p. m., Monday, May 19, 1958, the hearing was adjourned.)

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